```
Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Ttoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes Genome Res. 10.(10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AKO38395

Mus musculus adult male hypothalamus CDNA, RIKEN full-length enriched library, clone:A230002004 product:METABOTROPIC GLUTAMATE RECEPTOR 8 PRECURSOR, full insert sequence.
                                                           AKO32422 MUB MUBCU
AU296039 AU296039
BIB37857 603074065
CXG14839 SB02040B2
BI732193 SB02040B2
BI732193 SB02040B2
BI732193 BP359939
BM490671 BP359939
BM490671 BP359939
CASTA4834 673311 NC
AL185767 Tetraodon
AL311439 Tetraodon
AL311439 Tetraodon
AL311439 Tetraodon
CD280064 G4469.19
BG261524 G02373277
CA408051 STR00549
BU456417 603217533
CB517356 BB185933
AL189044 Tetraodon
AL189044 Tetraodon
AL0060555 S60401247
BE779818 601465317
CC208336 CH21444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamuras, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
                                        Tetraodon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Carninci, P. and Hayashizaki, Y.
High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ALIGNMENTS
           CR717163
CD353576
CNS04TPP
CN409312
AK032422
AU296039
B1827857
CN460548
                                                                                                                                                          BP359939
BM490671
BM964289
CD609655
CA344834
CNS028BY
CNS024AXAU
AK034263
BXR73944
                                                                                                                                                                                                                                                                                                                                              CB517356
CNS02AUZ
AK002958
CNS054KQ
CD609656
BB779818
                                                                                                                                                                                                                                                                                                                                                                                                                             CNS02JYY
CC208336
CD252943
CN468842
                                                                                                                                  CK314839
BI732193
                                                                                                                                                                                                                                                                               CE724887
CD280064
BG261524
CA408051
BU456417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GI:26086504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AK038395
AK038395.1 GI:260
HTC; CAP trapper.
 33399
10582
10582
3873
3873
7953
7953
733
733
7182
7182
7182
                                                                                                                                                                                                                                                                                666
645
895
665
                                                                                                                                                                                                                                                                                                                                                633
1029
1736
1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .0349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1042159
770.5
766.5
763.5
758
744.5
735.5
729
723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 1
AK038395
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
 Command line parameters:
-MODEL=frame+ p2n.model.-DBV=x1h
-Q=/Cgn2_1/USPTO_spool/US1082832/runat_17062005_170038_7263/app_query.fasta_1.775
-Q=/Cgn2_1/USPTO_spool/US10828332/runat_17062005_170038_7260_-LCOPEXT=0
-UNITS=b16s_0FYT=1 -END=-1 -MATRIX=b10sum62 -TRANS=human40.cdi -LIST=45
-UNITS=b16s_START=1 -END=-1 -MATRIX=b10sum62 -TRANS=human40.cdi -LIST=45
-UNITS=b1cs_0FYT=1 -END=-1 -MATRIX=b10sum62 -TRANS=human40.cdi -LIST=65
-UNITS=b1cs_0FYT=1 -END=-1 -MATRIX=b10sum62 -TRANS=n00000000
-USER=US10828332_@CGN 1 1_4352_@runat_17062005_170038_7263 -NCPU=6 -ICPU=3
-NO MAAP-LARGEQUERS -NEG SCORES=0 -MAIT -DSPBIGOCK=100 -LONGIAG
-DBV_TIMEOUT=120 -WARN TIMEOUT=30 -THRADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AK038395 Mus muscu
BC051384 Mus muscu
AY406143 Hus muscu
AY406145 Mus muscu
AY406146 Pan trogl
AY401208 Homo sapi
AY401210 Mus muscu
AK053447 Mus muscu
AY401209 Pan trogl
                                                                                    June 21, 2005, 10:53:33; Search time 5243 Seconds (without alignments) 4239.850 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Description
                                                                                                                                                                     1 MPGVSSSLPTRMTSGFDRYF.....LETPALATKQTYVTYTNHAI
                           Compugen Ltd.
                                                                 nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                                                                34239544 segs, 19032134700 residues
            GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compug
                                                                                                                                                                                                                                                                                                          hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                        Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BC051384
AY406143
AY406145
AY406144
AY401208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AY401210
AK053447
AY401209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AK038395
                                                                                                                                                                                                BLOSUM62
Xgapop 10.0, Xgapext
Ygapop 10.0, Ygapext
Fgapop 6.0, Fgapext
Delop 6.0, Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                   DB seq length: 0
DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ოთ
                                                                                                                                             US-10-828-332-7
3107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gb_estl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3675
3693
3693
2671
2671
2748
2748
2748
2748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  71.8
71.4
71.3
69.4
68.9
                                                                                                                                                                                                                                                                                                          Total number of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2348
2348
2280.5
2229.5
2219
2214
2156.5
2140
                                                                                                                                                            Perfect score:
                                                                                                                                                                                                   Scoring table:
                                                                  OM protein -
                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                                                                 Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Database
                                                                                                                                                                                                                                                                                                                                     Minimum I
Maximum I
                                                                                            Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Result
No.
```

a

1641

81

61

1761

121

1701

101

1821

141

1881

181

161

2001

201

```
2002 AAGAAAACCGTGAAAGGGGTCCCTTGCTGCTGCTGTGAACGCTGCGAGGTTATAAC 2061
                                                                            GGAGCTGTGACAATTTTGCCCAAAAGAGCATCAATTGATGGGTTTGACCGATACTTTAGA 146
                                                                                                                                                                                                         LyslysThrValLysGlyMetAlaCysCysTrpHisCysGluProCysThrGlyTyrGln 221
                                                                                                                                                                                                                                                                                142 AspAlaProGlyArgTyrAspIleTyrGlnTyrGlnLeuArgAsnGlySerAlaGluTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       162 LygVallleGlySerTrpThrAspHisLeuHisLeuArglleGluArgMetGlnTrpPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               282 ValArgTyrAsnAspThrProlleValLysAlaSerGlyArgGluLeuSerTyrValLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Greecharandacaeaecaaredrangaecrreregeeeegaaerragrrarere
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LeualaGly1lePheLeuCygTyzalaThrThrPheLeuMet1leAlaGluProAspLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GlyThrCysSerLeuArgArgllePheLeuGlyLeuGlyMetSerIleSerTyrAlaAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2362 ATCATCTGCTCTTTCCGAAGGATCTTCCTGGGACTTGGTATGTGTTTCAGCTATGCAGCA
                                          GlyValSerSerSerLeuProThrArgMetThr---SerGlyPheAspArgTyrPheSer
                                                                                                                                                                                                                                                          AsnArgGluArgIleGlyGlnAspSerAlaTyrGluGlnGluGlyLysValGlnPheVal
                                                                                                                                                                                                                                                                                                                                     IleaspalavalTyralaMetGlyHisAlaLeuHisAlaMetHisArgAspLeuCysPro
                                                                                                                                                                                                                                                                                                                                                      102 GlyArgValGlyLeuCysProArgMetAspProValAspGlyThrGlnLeuLeuLysTyr
                                                                                                                                                                                                                                                                                                                                                                                                                           122 IleargasnvalasnPheSerGlyIlealaGlyAsnProValThrPheAsnGluAsnGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TyrginValAspArgTyrThrCysLysThrCysProTyrAspMetArgProThrGluAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2062 raccadgricaacterecrereraactericecertrecarcagadacaacateaac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                242 ArgThrSerCysGlnProIleProIleValLysLeuGluTrpAspSerProTrpAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LeuproLeupheLeuAlaValValGlyIleAlaAlaThrLeuPheValValThrPhe
                                                                                                                                                                                         PheHisCysLysLeuSerArgHisAlaLeuLysLysGlySerHisIleLysLysCysThr
         US-10-828-332-7 (1-584) x AK038395 (1-3675)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         262
                                                                                1405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   302
                                            ო
                                                                                                                                                                                         42
                                                                                                                                                                                                                                                              62
                                                                                                                                                                                                                                                                                                                                     82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       육 참
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                       g
                                                                                                                                              g
                                                                                                                                                                                     ò
                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                          ò
                                                                                                                  8
                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                Adachi, J., Alzawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P., Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W., Hayashida, K., Hayateu, N., Hiramoto, K., Hiracoka, T., Hirozane, T., Haris, F., Imotani, K., Ishii, Y., Itoh, M., Kagawa, T., Kautoh, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M., Katoh, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M., Nokata, S., Kutihara, C., Matsuyama, T., Miyazaki, A., Muxata, M., Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N., Sano, H., Saeaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Muramatsu, M., and Hayashizaki, Y., Yasunishi, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (16-UUL-2001) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for denome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.jp, URL:http://genome.gsc.riken.jp/, Tel:81-45-503-9222,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             enriched mouse cDNA library'
                                                                                                                                                                                                                                                            Group Phase I & II Team.
Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs
Nature 420, 563-573 (2002)
6 (bases 1 to 3675)
                                                                                                                                                       he RIKEN Genome Exploration Research Group Phase II Team and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /dev_Brage="adult"
1. 3675
/note="hETABOTROPIC GLUTAMATE RECEPTOR 8 PRECURSOR
(SWISSPROT|P47743, evidence: FASTY, 97.2%ID, 100%length,
match=2780)"
roneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuura,S., Kawai Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and Hayashizaki,Y. RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                             The FANTOM Consortium and the RIKEN Genome Exploration Research
                                                                                                                                                                      FANTOM Consortium.
Functional annotation of a full-length mouse cDNA collection
Nature 409, 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3675
437
61
83
21
3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        prepare mouse tissues.
Please visit our web site for further details.
URL:http://gancome.gsc.riken.jp/
URL:http://fantom.gsc.riken.jp/.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="FANTOM DB:A230002004"
/db_xref="taxon:10090"
/clone="A230002004"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /tissue_type="hypothalamus"
/clone_lib="RIKEN full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Mus musculus"
/mol_type="mRNA"
/strain="C57BL/63"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2.04e-230
2348.00
82.72
72.59
75.57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . .3675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score:
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                   0530913
                                                                                                                     1076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No.:
                                                                                                                   PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                       TITLE
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
                                                                                                   MEDLINE
                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
```

2181

2121

261

241

2241

281

301

321

2421

Wed

.음 &

g ઠ a ઠે 셤 8 g ઠે 원 ઠે 셤 ઠે 셤 8 g ò g ઠ

셤 δ

```
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J., Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J., McKarnan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S., WcKernan, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W., Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A., Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S., Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y., Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, B.D., Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M., Schein, Y.S., Kzzywinski, M.I., Skalska, U., Smailus, D.E., Schnerch, A., Schein, J.E., Jones, S.J., and Marra, M.A., Schein, J.E., Jones, S.J., and Marra, M.A., Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               be found
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaithersburg, Maryland;
Web site: http://www.nisc.nih.gov/
Neb site: http://www.nisc.nih.gov/
Akhter.N., Ayele.K., Becketrom-Sternberg,S.M., Benjamin,B.,
Akhter.N., Ayele.K., Becketrom-Sternberg,S.M., Brinkley.C., Brooks,S.,
Blakesley,R.W., Bouffard,G.G., Breen,K., Brinkley.C., Brooks,S.,
Dietrich,N.L., Granite,S., Guan,X., Gupta,J., Haghighi,P.,
Hansen,N., Ho,S.-L., Karlins,B., Kwong,P., Laric,P., Legaspi,R.,
McDowell,J., Pearseon,R., Stantripop,S., Thomas,P.J., Touchman,J.W.
Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L.,
Young,A., Zhang,L.-H. and Green,B.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Clone distribution: MGC clone distribution information can be four through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAK Plate: 100 Row: j Column: 8
This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 6680104
This clone has the following problem: frame shifted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GlyValSerSerLeuProThrArgMetThr---SerGlyPheAspArgTyrPheSer 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Direct Submission
Submitted (12-APR-2003) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: cgapbs-r@mail.nih.gov
Tissue Procurement: The Cepko Laboratory
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.B. Consortium (LLNL)
DNA Sequencing by: National Institutes of Health Intramural
Sequencing Center (NISC),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /tissue type="Eye, retina, mouse strain C57Bl\6"
/clone Tib="NIH MGC_94"
/lab_hōst="DH10B"
                                                                                                                                                                                                                                                                                                                                                                    Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
22388257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3693
437
61
83
21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="Vector: pCMV-SPORT6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. 3693
/organiem="Mus musculus"
/mol_type="mRNA"
/db_xref="taxon:10090"
/clone="IMAGE:6466902"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-828-332-7 (1-584) x BC051384 (1-3693)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2.06e-230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 3693)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2348.00
82.72$
72.59$
75.57$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Strausberg, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                           12477932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REMARK
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus (house mouse)
Mus musculus
Bukaryota, Metazoa; Chordata, Craniata, Vertebrata, Euteleostomi,
Bukaryota; Metazoa; Chordata, Craniata, Vertebrata; Euteleostomi,
1 (bases 1 to 3693)
Straubberg, R.L., Feligold, E.A., Grouse, L.H., Derge, J.G.,
Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                        2721
                                2542 CAGCTCCTTGGAGTGTTTGTGTGTGGTTTGTGTGGATCCCCCCCACACCATACATTGACTAT 2601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2782 ACCATGTACACCACGTGCATCATTTGGTTAGCTTTCATTCCCATCTTTTTTGGTACAGCC 2841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8602 GGAGAACAGCGAACACTGGATCCCGAGAACGCCAGGGAGTGCTCAAGTGTGACATTTCC 2661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HTC 19-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2902 GCTTCAGTGTCTCTGGGAATGCTCTATATGCCCAAAGTTTATATTATAATTTTTTCATCCA 2961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3022 CAAAGCAAACTGATCCAAAAGGGAAATGACAGACCAAAACGGCGAGGTGAAAGTGAACTC 3081
                                                                                                                                                                                                                                                                                                                                                                                441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             569
                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         462 ThrMetTyrThrCyelleValTrpLeuAlaPheIleProllePheBlyThrSer 481
                                                                                                                                                 382 GlnLeuLeuGlylleCysValTrpPheValValAspProSerHisSerValValAspPhe 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BC051384
Mus musculus glutamate receptor, metabotropic 8, mRNA (cDNA clone IMAGE:6466902), containing frame-shift errors.
                                                                                                                                                                                                                                                                                                                                                                                                             2662 GATCTGTCACTCATTGTTCACTGGGATACAGTATCCTCCTGATGGTCACTTGTACTGTT
                                                                                                                                                                                                                                                                                                                                                                             422 AspleuSerLeulleCysLeuLeuGlyTyrSerMetLeuLeuMetValThrCysThrVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AlaSerValSerLeuGlyMetLeuTyrMetProLygValTyrllelleuPheHisPro
                                                                                                                                                                                                                                                               402 GlnAspGlnArgThrLeuAspProArgPheAlaArgGlyValLeuLysCysAspIleSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2722 TATGCCATTAAAACCAGAGGGGTTCCAGAACGTTCAATGAAGCCAAACCTATTGGATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GlnSerAlaAspLysLeuTyrIleGlnThrThrThrLeuThrValSerValSerLeuSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GluGlnAsnValProLysArgLysArgSerLeuLysAlaValThrAlaAlaThrMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 442 TyrAlaileLy8ThrArgGlyValProGluThrPheAsnGluAlaLy8ProileGlyPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            542 SerAsnLysPheThrGlnLysGlyAsnPheArgProAsnGlyGluAlaLysSerGluLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           562 CysGluAsnLeuGluThrProAla-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BC051384
BC051384.1 GI:30410848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         :|||
3202 AATC 3205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         583 alle 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BC051384
```

8 셤

Wed

ઠે ద ઠે g ት ብ

8 6 8 6

6 6 6 6 6 6

8 4 8 4 8 8

8 6 8 6

8 8 8

셤 ò

```
GSS 15-DEC-2003
sequence,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human-chimp-mouse orthologous
                                                                                                                                                                                                                                   2488 CAGCTCCTTGGAGTGTTTGTGTGGTTTGTCGTGGATCCCCCCCACATCATTGACTAT
                                                                                                         GARGARCAGCGARACACTGGAGAACGCCAGGGGGGGTGTCTCAAGTGTGACATTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SerAsnLysPheThrGlnLysGlyAsnPheArgProAsnGlyGluAlaLysSerGluLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GlnLeuLeuGly1leCysValTrpPheValValAspProSerHisSerValValAspPhe
                                                                                    GlnAspGlnArgThrLeuAspProArgPheAlaArgGlyValLeuLysCysAspIleSer
                                                                                                                                                           422 AspLeuSerLeuIleCysLeuLeuGlyTyrSerMetLeuLeuMetValThrCysThrVal
                                                                                                                                                                                GluGlnAsnValProLysArgLysArgSerLeuLysAlaValValThrAlaAlaThrMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleoston Mammalia, Eutheria, Primates; Catarrhini, Hominidae, Homo.
1 (Dases 1 to 2671)
Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Trodd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B., Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 (bases 1 to 2671)
Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A.,
Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2671 bp DNA linear gene, VIRTUAL TRANSCRIPT, partial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CysGluAsnLeuGluThrProAla-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Science 302 (5652), 1960-1963 (2003) 14671302 2 (bases 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Inferring nonneutral evolution from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens GRM8 gene,
genomic survey sequence.
AY406143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AY406143.1 GI:39762117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3148 AATC 3151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  alle 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AY406143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            542
                                                                                                                                                                                                                                                                                                                                                 2728
                                                                                                                                                                                                                                                                                                                                                                                                                       2788
                 382
                                                                                        402
                                                                                                                            2548
                                                                                                                                                                                                 2608
                                                                                                                                                                                                                                                                                                              462
                                                                                                                                                                                                                                                                                                                                                                                   482
                                                                                                                                                                                                                                                                                                                                                                                                                                                            502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 3
AY406143
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                       8 & 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                 8 8 8 8 8
                                                                                                                                                                                     a
                                                                                                                                                                                                                                     8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     કે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                    1470
                                                                                                                                                                                                                                                                                           1647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2487
GGAGCTGTGACAATTTTGCCCAAAAGAGCATCAATTGATGGGTTTGACCGATACTTTAGA 1410
                                                                                                                                                                                                                    1587
                                                                                                                                                                                                                                                                                                                                                    1947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   341
                                                                                                                                                                                                                                                                                                                                                                                                      141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            281
                                                                                                                                                                                                                                                        101
                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LysVallleGlySerTrpThrAspHisLeuHisLeuArglleGluArgMetGlnTrpPro 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LyslysThrVallysGlyMetAlaCysCysTrpHisCysGluProCysThrGlyTyrGln 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LeuAlaGlyIlePheLeuCysTyxAlaThrThrPheLeuMetIleAlaGluProAspLeu 321
                                                                                                                                                                                  81
                                    41
                                                                                                           61
                                                                                                                                                                                                                                                       IleaspalavaltyralametGlyHisalaLeuHisalametHisargaspLeuCysPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGCTGGAGCGAATTGCACGGGATTCATCTTACGAACAAGAAGGAAAGGTTCAATTTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTACCTGTGTTCATAGCAATATTGGGAATCATTGCCACCACCACCACTTGTGATTGTGACCTTT

GTACCTGTGTTCATAGCAATATTGGGAATCATTGCCACCACCACCACCACCACTTGTGATGTGATGTGATGTGATGTGATGTGATGTGATGTGATGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGTGATTGATTGTGATTGATTGTGATTGATTGATTGATTGTGATTGATTGATTGATTGATTGTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGATTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LeuleuThriysThrAsnArglleTyrArgllePheGluGluGlyLysArgSerValSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AlaProArgPhelleSerProAlaSerGlnLeuAlalleThrPhelleLeulleSerLeu
                                  SerArgThrLeuAspAsnAsnArgArgAsnIleTrpPheAlaGluPheTrpGluAspAsn
                                                       PheHisCysLysLeuSerArgHisAlaLeuLysLysGlySerHisIleLysLysCysThr
                                                                                                                                                                                AsnArgGluArgIleGlyGlnAspSerAlaTyrGluGluGlyLysValGlnPheVal
                                                                                                                                                                                                                                                                                                                               GlyArgValGlyLeuCysProArgMetAspProValAspGlyThrGlnLeuLeuLysTyr
                                                                                                                                                                                                                                                                                                                                                                                                        IleArgAsnValAsnPheSerGlyIleAlaGlyAsnProValThrPheAsnGluAsnGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GlySerGlyGlnGlnLeuProArgSerIleCysSerLeuProCysGlnProGlyGluArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TyrGlnValAspArgTyrThrCysLysThrCysProTyrAspMetArgProThrGluAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LeuProLeuPheLeuAlavalValGlyIleAlaAlaThrLeuPheValValValThrPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GlyThrCysSerLeuArgArgIlePheLeuGlyLeuGlyMetSerIleSerTyrAlaAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1321
                                                                                                                                           1471
                                                                                                                                                                                                                      1528
                                                                                                                                                                                                                                                                                             1588
                                                                                                                                                                                                                                                                                                                                                                      1648
                                                                                                                                                                                                                                                                                                                                                                                                                                             1708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2308
                                    22
                                                                        1411
                                                                                                           42
                                                                                                                                                                                  62
                                                                                                                                                                                                                                                        82
                                                                                                                                                                                                                                                                                                                                   102
                                                                                                                                                                                                                                                                                                                                                                                                        122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2428
```

2847

501

2907

521

2967

541

3027

561

3087

569

3147

2787

481

2667

441

2727

S

281

301

1989

361

401

421

441

```
GTCCGCTATAATGACACACCTATCGTGAGGGCTTCAGGACGCGAACTTAGTTACGTGCTC 1869
                                                                                                                                                                                                                   2050 GCGCCCAAGTTCATTAGTCCAGCATCTCAGCTGATCACCTTCAGCCTCATCTCCGTC 2109
                                                                                                                                                                                                                                                                                                                                                                                                                                             2170 GGAGAGCAGCGACACTAGATCCAGAGAGGCCAGGGGAGTGCTCAAGTGTGAGATTTCT 2229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2230 GAICTCACTCATTTGTTCACTTGATACAGTATCCTCTTGATGGTCACTTGTACTGTT 2289
     1630 TACCAGGTGGATGAGCTGTCTGTGAACTTTGCCCTCTGGATCAGAGACCCAACATGAAC 1689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2350 ACCATGTATACCACCTGCATCATTGGTTAGCTTTCATCCCCATCTTTTTTGGTACAGCC 2409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2649
                                                                                                                                                                                                                                                                                                                                                                      AlaProArgPheIleSerProAlaSerGlnLeuAlaIleThrPheIleLeuIleSerLeu 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GSS 15-DEC-2003
                                                                                                                                                                                                  LeuAlaGlyIlePheLeuCysTyrAlaThrThrPheLeuMetIleAlaGluProAspLeu 321
                                                                                                     LeuLeuThrLygThrAgnArg11eTyrArg11ePheG1uG1nG1yLygArgSerVa1Ser
                                                                                                                                                                                                                                                                                                                                                                                                                             GlnLeuLeuGlyIleCysValTrpPheValValAspProSerHisSerValValAspPhe
                                                                                                                                              ValArgTyrAsnAspThrProlleValLysAlaSerGlyArgGluLeuSerTyrValLeu
                                                                                                                                                                                                                                                       322 GlyThrCysSerLeuArgArgllePheLeuGlyLeuGlyMetSerlleSerTyrAlaAla
                                                                                                                                                                                                                                                                                                                                          cricigaccaaaaccaaaccerarccacceaararrigaecaeeeeaaaarcrercaca
                                                                                     LeuProLeuPheLeuAlaValValGlyIleAlaAlaThrLeuPheValValValThrPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GlnAspGlnArgThrLeuAspProArgPheAlaArgGlyValLeuLysCysAspIleSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2290 TATGCCATTAAAACGAGAGGGGTGTCCCAGAGACTTTCAATGAAGCCAAACCTATTGGATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2470 GCTTCAGTATCTCTGGGCATGCTCTATATGCCCCAAGGTTTATATATTATAATTTTCATCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GluGlnAsnValProLysArgLysArgSerLeuLysAlaValValThrAlaAlaThrMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                542 SerAsnLysPheThrGlnLysGlyAsnPheArgProAsnGlyGluAlaLysSerGluLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TyralalleLysThrArgGlyValProGluThrPheAsnGluAlaLysProlleGlyPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ThrMetTyrThrThrCysIleValTrpLeuAlaPheIleProIlePhePheGlyThrSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GlnSerAlaAspLysLeuTyrIleGlnThrThrThrLeuThrValSerValSerLeuSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AlaSerValSerLeuGlyMetLeuTyrMetProLysValTyrIleIleLeuPheHisPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2530 GAACAGAATGTTCAAAAACGCAAGAGGAGCTTCAAGGCTGTGGTGACAGCTGCCACCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2590 CAAAGCAAACTGATCCAAAAAGGAAATGACAGACCAAATGGCGAGGTGAAAAGTGAACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AspleuSerleuIleCysleuLeuGlyTyrSerMetLeuLeuMetValThrCysThrVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |||||||:::||||||||
2650 TGTGAGAGTCTTGAAACC 2667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CysGluAsnLeuGluThr 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AY406145
                                                                                      262
                                                                                                                                                                        1810
                                                                                                                                                                                                                             1870
                                                                                                                                                                                                                                                                                                                                          1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                        2110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        522
                                                                                                                                              282
                                                                                                                                                                                                  302
                                                                                                                                                                                                                                                                                                                342
                                                                                                                                                                                                                                                                                                                                                                       362
                                                                                                                                                                                                                                                                                                                                                                                                                             382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 4
AY406145
LOCUS
                               8
                                                         셤
                                                                                 ઠે
                                                                                                            g
                                                                                                                                           ò
                                                                                                                                                                  셤
                                                                                                                                                                                         ે
                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                   요
                                                                                                                                                                                                                                                                                                                                                           8 &
                                                                                                                                                                                                                                                                                                                                                                                                                    ∂
                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1455
                                                                                                                                                                                                                                                                                                                                                                                                    1039 AGCCGAACTCTTGCCAATAATGGAAAATGTGTGGTTTGCAGAATTTCTGGGAGAAAT 1098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           82 IleAspAlaValTyrAlaMetGlyHisAlaLeuHisAlaMetHisArgAspLeuCysPro 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GlyArgValGlyLeuCysProArgMetAspProValAspGlyThrGlnLeuLeuLysTyr 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AspalaproGlyArgTyrAspIleTyrGlnTyrGlnLeuArgAsnGlySerAlaGluTyr 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                           41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        81
                                                                                                                                                                                                                                                                                                                                                                                    21
Ferriera,S.., Wang,G., Zheng,X.H., White,T.J., Sninsky,J.J., Adams,M.D. and Cargill,M. Direct Submission
Direct Submission
Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive, Rockville, MD 20850, USA
This sequence was made by sequencing genomic exons and ordering them based on alignment.

Location/Qualifiers
1..2671
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xef="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                3 GlyValSerSerLeuProThrArgMetThr---SerGlyPheAspArgTyrPheSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               122 IleArgAsnValAsnPheSerGlyIleAlaGlyAsnProValThrPheAsnGluAsnGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GlySerGlyGlnGlnLeuProArgSerIleCysSerLeuProCysGlnBroGlyGluArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TyrGlnValAapArgTyrThrCyaLyaThrCysProTyrAapMetArgProThrGluAan
                                                                                                                                                                                                                                                                                                                                                                                                                                          SerArgThrLeuAspAsnAsnArgArgAsnIleTrpPheAlaGluPheTrpGluAspAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PheHisCysLysLeuSerArgHisAlaLeuLysLysGlySerHisIleLysLysCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     62 AsnArgGluArgIleGlyGlnAspSerAlaTyrGluGluGluGlyLysValGlnPheVal
                                                                                                                                                                                                                                                      2671
427
52
83
4
                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                          Gaps:
                                                                                                                                                                                                                                                                                                                                                       US-10-828-332-7 (1-584) x AY406143 (1-2671)
                                                                                                                                                                                   /gene="GRM8"
/locus_tag="HCM2459"
                                                                                                                                                                                                                                                    1.79e-225
2298.00
84.63%
75.44%
                                                                                                                                                                      <1. .>2671
                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                          Alignment Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1510
                                                                                                                                                                                                                                                                                                                                                                                                                                          22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           222
                                                                                                                                                                                                                                                       ..
0
                              TITLE
JOURNAL
                                                                                                                                                                      gene
                                                                                                  FEATURES
                                                                       COMMENT
                                                                                                                                                                                                               ORIGIN
```

යි පි

ద ઠે g

8 S

8 6 8 6

Š g

ઠે g ò g ઠે g ò Q ઠે

2349

481

461

2469

501

2529

541

521

2589

```
1456
                                                                                                                                                                                                                                                                                                                                     1810
                                                                                                                                                                                                                                                                                                                                                                             1870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            482
            1336
                               142
                                                   1396
                                                                      162
                                                                                                                                                     202
                                                                                                                                                                                             222
                                                                                                                                                                                                                                    242
                                                                                                                                                                                                                                                        1690
                                                                                                                                                                                                                                                                            262
                                                                                                                                                                                                                                                                                                                    282
                                                                                                                                                                                                                                                                                                                                                         302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                       ద
                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                   d
                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                  요
                                                                                                                                                                                                                                                                                                                                                   ે
                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                    셤
                                                                                                            ઠે
                                                                                                                         දු දු
                                                                                                                                                                    셤
                                                                                                                                                                                            ò
                                                                                                                                                                                                          ద
                                                                                                                                                                                                                            ે
                                                                                                                                                                                                                                                                   ò
                         8 8
                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1099 iriggargcaaarraggarcacarggg---aagaggaacagrcararaaaaaaargcaca 1155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IleArgAsnValAsnPheSerGlyIleAlaGlyAsnProValThrPheAsnGluAsnGly 141
                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 2667)
Clark, A.G. Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Todd, M.A., Tanenbaum, D.M., Civello, D.R., Iu. F., Murphy, B., Reriacra, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                 Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Clark, A.G., Glanowski, S., Nielson, R., Lu, F., Murphy, B., Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B., Ferziara, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M. Direct Submission

Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive, Rockville, MD 20850, USA

This sequence was made by sequencing genomic exons and ordering them based on alignment.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GlyArgValGlyLeuCysProArgMetAspProValAspGlyThrGlnLeuLeuLysTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1276 GGTTACATAGGCCTTTGCCCAAGGATGGTTACCATCGATGGGAAAGAGCTACTGGGTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GlyValSerSerLeuProThrArgMetThr---SerGlyPheAspArgTyrPheSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SerargThrLeuAspAsnAsnArgArgAsnIleTrpPheAlaGluPheTrpGluAspAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PheHisCysLysLeuSerArgHisAlaLeuLysLysGlySerHisIleLysLysCysThr
    gene, VIRTUAL TRANSCRIPT, partial sequence,
                                                                                                                                                                                                                                                                                                                                                                                                2667
427
53
81
6
                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                               Science 302 (5652), 1960-1963 (2003)
                                                                                                                                                                                                                                                                                                  l. .2667
/organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                   /mol_type="genomic DNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (1-2667)
                                                                                                                                                                                                                                                                                                                                                  /gene="GRM8"
/locus_tag="HCM2459"
                                                    Mus musculus (house mouse)
                     AY406145.1 GI:39762119 GSS.
             genomic survey sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-828-332-7 (1-584) x AY406145
                                                                                                                                                                                                                                                                                                                                                                                                 1.15e-223
2280.50
84.81%
75.44%
                                                                                                                                                                                                                                                                                                                                        .>2667
    GRM8
                                                                Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                       gene trios
                                                                                                                                                                           4671302
                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        122
                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                    ..
No.:
    DEFINITION
                                                              ORGANISM
                      ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                         PUBMED
REFERENCE
AUTHORS
                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                           gene
                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

2289 1809 1869 2109 2229 2350 ACCATGTACACCACGTGCATCATTGGTTAGCTTTCATTCCCATCTTTTTTGGTACACGCC 2409 1990 CTTTGACCAAAACAAACCGTATCCACCGAATATTCGAGCAAGGGAAGAAATCTGTCACA 2049 2110 CAGCTCCTTGGAGTGTTTGTGTGGTTTGTCGTGGATCCCCCCCACACCACACCATGACTAT 2169 ||||:::|||||| |||||||::: ||||||| | AAAATCATCGGCCACTGGACCAATCAACTTCAC-----GTGGAAGACATGCAGTGGGCT 1509 241 261 281 381 LysvalileGlySerTrpThrAspHisLeuHisLeuArgIleGluArgMetGlnTrpPro 181 LysLysThrVallysGlyMetAlaCysCysTrpHisCysGluProCysThrGlyTyrGln 221 ValArgTyrAsnAspThrProlleValLysAlaSerGlyArgGluLeuSerTyrValLeu 301 341 361 401 421 441 461 481 501 342 LeuLeuThrLysThrAsnArglleTyrArgllePheGluGlnGlyLysArgSerValSer 362 AlaProArgPhelleSerProAlaSerGlnLeuAlaIleThrPhelleLeuIleSerLeu 2050 GCACCTAAGTTCATCACCCAGCATCCCAGCTGGTGATCACCTTCAGCCTCATCTCCGTA 2230 GAICTGFCACTCATTTGFTCACTGGGATACAGTATCCTCCTGATGGTCACTTGTACTGTT 462 ThrMetTyrThrThrCyglleValTrpLeuAlaPhelleProllePheBheGlyThrSer 322 GlyThrCysSerLeuArgArgllePheLeuGlyLeuGlyMetSerIleSerTyrAlaAla 382 GlnLeuLeuGlyIleCysValTrpPheValValAspProSerHisSerValValAspPhe AspleuSerleulleCysLeuLeuGlyTyrSerMetLeuLeuMetValThrCysThrVal TyralaileLysThrArgGlyValProGluThrPheAsnGluAlaLysProIleGlyPhe 2290 TATGCCATTAAAACCAGAGGGTTCCAGAAACGTTCAATGAAGCCAAACCTATTGGATTT AspAlaProGlyArgTyrAspIleTyrGlnTyrGlnLeuArgAsnGlySerAlaGluTyr TyrGlnValAspArgTyrThrCysLysThrCysProTyrAspMetArgProThrGluAsn LeuProLeuPheLeuAlaValValGlyIleAlaAlaThrLeuPheValValThrPhe ArgThrSerCysGlnProlleProlleValLysLeuGluTrpAspSerProTrpAlaVal

1437

1197

75

1137

53

```
ThrPheAsnGluAsnGlyAspAlaProGlyArgTyrAspIleTyrGlnTyrGlnLeuArg 155
                                                                                                                                                                                                                                                                                                                                                                                                                GluArgMetGlnTrpProGlySerGlyGlnGlnLeuProArgSerIleCysSerLeuPro 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2092 TTCAGCCTCATCTCCGTCCAGCTCCTTGGAGTGTTTGTCTGGGTTTGTGTGGATCCCCCC 2151
                                                                                                                                                                                                                                                                                                                                                         156 AsnGlySerAlaGluTyrLysValIleGlySerTrpThrAspHisLeuHisLeuArglle 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               376 PhelleLeulleSerLeuGlnLeuLeuGlyIleCysValTrpPheValValAspProSer 395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HisServalvalAspPheGlnAspGlnArgThrLeuAspProArgPheAlaArgGlyVal 415
                                                        1378 ACTITIAATGAAAACGGAGATGCTCCTGGACGTTATGATATCTTCCAGTATCAAAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                          CysGlnProGlyGluArgLysLysThrValLysGlyMetAlaCysCysTrpHisCysGlu
                                                                                                                                                                                                                                      116 ThrGlnLeuLeuLysTyrlleArgAsnValAsnPheSerGlyIleAlaGlyAsnProVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 216 ProCysThrGlyTyrGlnTyrGlnValAspArgTyrThrCysLysThrCysProTyrAsp
                             GAATTTTGGGAGGAGAATTTTGGCTGCAAGTTAGGATCACATGGG---AAAAGGAACAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              236 MetArgProThrGluAsnArgThrSerCysGlnProlleProlleValLysLeuGluTrp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PhevalvalvalvalthrPhevalArgTyrAsnAspThrProllevalLysAlaSerGlyArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  316 IlealaGluProAspLeuGlyThrCysSerLeuArgArgIlePheLeuGlyLeuGlyMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   336 SerlleSerTyrAlaAlaLeuLeuThrLysThrAsnArgileTyrArgilePheGluGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1972 TGTTTCAGCTATGCAGCCCTTCTGACCAAAACAAACGGTATCCACCGAATATTTGAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2032 GGGAAGAAATCTGTCACAGGGCCCAAGTTCATTAGTCCAGGATCTCAGCTGGTGATCACC
 GluPheTrpGluAspAsnPheH1sCysLysLeuSerArgH1sAlaLeuLysLysGlySer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GlyLysArgSerValSerAlaProArgPheIleSerProAlaSerGlnLeuAlaIleThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ::
                                                                                                                                                                                                                                                                                             136
                                                                                                                                                                                                                                                                                                                                                                                                                176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      356
 36
                              1081
                                                                                                                                                                                                                                                                                                                                                                                      1438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         396
                      g
                                                          8 8
                                                                                                               ઠે
                                                                                                                                      8 & 8
                                                                                                                                                                                                                                8 8 8
                                                                                                                                                                                                                                                                                                                    8 S
                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      કે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                      2526 GAGCAGAACGTTCAAAAACGCAAGAAGCTTCAAGGCTGTGGTCACGGCCGCTACCATG 2585
                                                                                                                                                                  2586 CAAAGCAAACTGATCCAAAAGGGAAATGACAGACCAAACGGCGAGGTGAAAAGTGAACTC 2645
                                                                                                                                                                                                                                                                                             AY406144 2671 bp DNA linear GSS 15-DEC-2003
Pan troglodytes GRMB gene, VIRTUAL TRANSCRIPT, partial sequence,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           541
                                                                                                                                               542 SerAsnLysPheThrGlnLysGlyAsnPheArgProAsnGlyGluAlaLysSerGluLeu 561
                                                                                                                                                                                                                                                                                                                                                                                Pan troglodytes (chimpanzee)
Pan troglodytes
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Bukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Pan.
1 (bases 1 to 2671)
Clark,A.G., Glanowski,S., Nielson,R., Thomas,P., Kejariwal,A.,
Todd,M.A., Tanenbaum,D.M., Civello,D.R., Lu,F., Murphy,B.,
Ferriera,S., Wang,G., Zheng,X.H., White,T.J., Sninsky,J.J.,
Adams,M.D. and Cargill,M.
Inferring nonneutral evolution from human-chimp-mouse orthologous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B., Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M.
Direct Submitselon
Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive, Rockville, MD 20850, USA
This sequence was made by sequencing genomic exons and ordering them based on alignment.
2410 CAGTCAGCAGA----ATGTACATCCAGACAACAACACTTACTGTCTCCATGAGTTTAAGT
                                                                                    522 GluGlnAsnValProLysArgLysArgSerLeuLysAlaValValThrAlaAlaThrMet
                                            2466 GCTTCAGTGTCTCTGGGGAATGCTCTATATGCCCAAAGTTTATATTATAATTTTCATCCA
                           AlaSerValSerLeuGlyMetLeuTyrMetProlysValTyr1le1leLeuPheHisPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
1. 2671
/organism="Pan troglodytes"
/mol type="genomic DNA"
/db_xref="taxon:9598"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene trios
Science 302 (5652), 1960-1963 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-828-332-7 (1-584) x AY406144 (1-2671)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     562 CysGluAsnLeuGluThr 567
|||||||:::|||||||||
2646 TGTGAGAGTCTTGAAACC 2663
                                                                                                                                                                                                                                                                                                                                        AY406144
AY406144.1 GI:39762118
                                                                                                                                                                                                                                                                                                                         genomic survey sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.13e-218
2229.50
83.33%
74.82%
71.76%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                           502
                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gene
                                                                                                                                                                                                                                                                              AY406144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                         δ
                                                셤
                                                                            ઠે
                                                                                                              q
                                                                                                                                              ò
                                                                                                                                                                     ద
                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
```

1671

255

295

235

215

1971

335

2091

8 & 8

ઠે

ò g õ වූ ò g ઠે

```
122 IleargasnvalasnPheSerGlyIlealaGlyasnProvalThrPheAsnGluAsnGly
                                                                                                                                                                                                                                                                                                                                                                                                             ArgLysLysThrValLysGlyMetAlaCysCysTrpHisCysGluProCysThrGlyTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    221 GlnTyrGlnValAspArgTyrThrCysLysThrCysProTyrAspMetArgProThrGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241 AsnArgThrSerCysGlnProlleProlleValLysLeuGluTrpAspSerProTrpAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         261 ValLeuProLeuPheLeuAlaValValG]VIleAlaAlaThrLeuPheValValValThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GlyArgValGlyLeuCysProArgMetAspProValAspGlyThrGlnLeuLeuLysTyr
                                                                                                                                         GlyValSerSerSerLeuProThrArgMetThr --- SerGlyPheAspArgTyrPheSer
                                         2748
408
74
100
2
                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                              Gaps:
                                                                                                                    US-10-828-332-7 (1-584) x AY401208 (1-2748)
/locus_tag="HCM0814"
                                       2.71e-217
2219.00
82.53%
69.86%
                                                               Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                         m
                                                                                                                                                                                                                                                                                                                                                          102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1834
                                Alignment S
Pred. No.:
                                                      Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8 6 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                  8 6 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                         ઠે
                                                                                                                                                        용
                                                                                                                                                                            8
                                                                                                                                                                                                    음 성 음
                                                                                                                                                                                                                                                                8 8 8
                                                                                                                                                                                                                                                                                                                              8 8 8 8
                                                                                                                   2511
                                                                                                                                                                                                                                                                                          2748 bp DNA linear GSS 15-DEC-2003
VIRTUAL TRANSCRIPT, partial sequence,
2272 ATGGTCACTTGTACTGTTTATGCCATTAAAACGAGAGGTGTCCCAGAGACTTTCAATGAA 2331
                                                                                                                                                             ilephephedlyThrSerGlnSerAlaAspLysLeuTyrIleGlnThrThrLeuThr 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryotani, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 2748)
1 (bases 1 to 2748)
1 (ark, A.G., Glanowski,S., Nielson,R., Thomas,P., Kejariwal,A., Todd,M.A., Tanenbaum,D.M., Civello,D.R., Lu,F., Murphy,B., Perriara,S., Wang,G., Zheng,X.H., White,T.J., Sninsky,J.J., Adams,M.D. and Cargill,M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Clark, A.G., Glancwski, S., Nielson, R., Thomas, P., Kejariwal, A., Clark, A.G., Glancwski, S., Nielson, R., Thomas, P., Kejariwal, A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B., Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M.
Direct Submitseion
Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive, Rockville, MD 20850, USA
Rockville, MD 20850, USA
This sequence was made by sequencing genomic exons and ordering them based on alignment.
                               MetValThrCysThrValTyrAla11eLysThrArgGlyValProGluThrPheAsnGlu
                                                                                                                                                                                                       516 IleIleLeuPheHisProGluGlnAsnValProLysArgLysArgSerLeuLysAlaVal
                                                                                                                                                                          2512 ATTATAATTTTTCATCCAGAACAGAATGTTCAAAAACGCAAGAGGGGGCTTCAAGGCTGTG
                                                                                                                                                                                                                                                                                                                                    gene trios
Science 302 (5652), 1960-1963 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1. .2748
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                 gene,
                                                                                                                                                                                                                                                                                                                                                                                                                           survey sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                     AY401208
AY401208.1 GI:39757197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <1. . . >2748
/gene="GRM7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                    AY401208
Homo sapiens GRM7
genomic survey seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14671302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo
                                                                                                                     456
                                                                                                                                          2332
             2152
                                 416
                                                     2212
                                                                            436
                                                                                                                                                               476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene
                                                                                                                                                                                                                                                                                                                                                                               RESULT 6
AY401208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
```

1413

141

1353

121

1533

1713

1653

240

1773

280

260

1173

61

1233

81

g

δ 셤 ò

```
||||:::|||||||||::
TTCAACTGCAAGTTGAATTAGTGGATCCAAAAAAGAAGACACGGATCGCAAATGCACA 1173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                142 ABPALAPTOGLYARGTYRABPILETYRGINTPRGINLEUARGABN---GLYSERALAGGU 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1474 TATCGTCTCATTGGGCAGTGGACAGATGAACTGCAGCTCAATATAGAGGACATGCAGTGG 1533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                82 IleAspAlaValTyrAlaMetGlyHisAlaLeuHisAlaMetHisArgAspLeuCysPro 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GlyArgValGlyLeuCysProArgMetAspProValAspGlyThrGlnLeuLeuLysTyr 121
                                                   Inferring nonneutral evolution from human-chimp-mouse orthologous
                                                                                                                                                                                                       genomic exons and ordering
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GlyvalSerSerSerLeuProThrArgMetThr---SerGlyPheAspArgTyrPheSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AsnArgGluArg1leGlyGlnAspSerAlaTyrGluGlnGluGlyLysvaValGlnPheVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TyrbysvalileGlySerTrpThrAppHisLeuHisLeuArglleGluArgMetGlnTrp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SerArgThrieuAspAsnAsnArgArgAsnIleTrpPheAlaGluPheTrpGluAspAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PheHisCysLysLeuSerArgHisAlaLeuLysLysGlySerHisIleLysLysCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IleArgAsnValAsnPheSerGlyIleAlaGlyAsnProValThrPheAsnGluAsnGly
                                                                                             140.130.4
2 (bases I to 2748)
2 (bases I to 2748)
Clark,A.G., Glanowski,S., Nielson,R., Thomas,P., Kejariwal,A.,
Todd,M.A., Tanenbaum,D.M., Civello,D.R., Lu,F., Murphy,B.,
Ferriera,S., Wang,G., Zheng,X.H., White,T.J., Sninsky,J.J.,
Adams,M.D. and Cargill,M.
Direct Submission
Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive,
Rockville, MD 20850, USA
Rockville, MD 20850, USA
This sequence was made by sequencing genomic exons and orderin
them based on alignment.
Location/Qualifiers
 Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B., Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M.
                                                                                                                                                                                                                                                                                                                                                                          2748
407
75
100
2
                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                           Science 302 (5652), 1960-1963 (2003)
                                                                                                                                                                                                                                                       /organism="Mus musculus"
/mol_type="genomic DNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-828-332-7 (1-584) x AY401210 (1-2748)
                                                                                                                                                                                                                                                                                                                         /locus_tag="HCM0814"
                                                                                                                                                                                                                                                                                                                                                                          8.89e-217
2214.00
82.53
69.69
71.26
                                                                                                                                                                                                                                                                                                            'gene="GRM7"
                                                                                                                                                                                                                                                                                               .>2748
                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
                                                                gene trios
                                                                                          14671302
                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           161
                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
DB:
                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                              Pred. No.:
                                                                                        PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                  TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                 gene
  AUTHORS
                                                                            JOURNAL
                                                                                                                                                                                                                                 FEATURES
                                                    TITLE
                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                         Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ያ ያ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Б
                                                                            2013
                                                                                                                                                                                2133
                                                                                                                                                                                                                                 2193
                                                                                                                                                                                                                                                                                    2253
                                                                                                                                                                                                                                                                                                                                       2313
                                                                                                                                                                                                                                                                                                                                                                                       2373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2673
                                                                                                                                                                                                                                                                                                                                                                                                                                          2433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2748 bp DNA linear GSS 15-DEC-2003 VIRTUAL TRANSCRIPT, partial sequence,
                                                                                                                               2073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2674 CTCTGTGAAAACGTAGACCCAAACAGCCCTGCTGCAAAAAAGAAGTATGTCAGTTATAAAT 2733
                                                   340
                                                                                                                                                                                                         400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    520
                                                                                                     360
                                                                                                                                                      380
                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                             440
                                                                                                                                                                                                                                                                                                                                                                460
                                                                                                                                                                                                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus (house mouse)
Mus musculus
Musryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
1 (bases 1 to 2748)
SerAlaProArgPhelleSerProAlaSerGlnLeuAlaIleThrPhelleLeuIleSer
                                                               PheGlnAspGlnArgThrLeuAspProArgPheAlaArgGlyValLeuLysCysAspIle
                                                                                                                                                                                                                                                                                                                                                                                                               2434 GCTCAATCAGCGGAAAAGCTCTACATACAAACTACCACGCTTACAATCTCCATGAACCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SerAlaSerValSerLeuGlyMetLeuTyrMetProLygValTyrIleIleLeuPheHis
                                                  LeuGlyThrCysSerLeuArgArgIlePheLeuGlyLeuGlyMetSerIleSerTyrAla
                                                                                                                                                                                                       LeuGlnLeuLeuGlyIleCysValTrpPheValValAspProSerHisSerValValAsp
                                                                                                                                                                                                                                                                       2494 AGTGCATCAGTGGCGCTGGGGATGCTATACATGCCGAAAGTGTACATCATCATTTTCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MetSerAsnLysPheThrGlnLysGlyAsnPheArgProAsnGlyGluAlaLysSerGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2614 ATGTCATCGAGGCTGTCACACAACCCAGTGACACCCAACGGTGAGGCCAAAGACCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LeuCysGluAsnLeuGluThrProAlaLeuAlaThrLysGlnThrTyrValThrTyrThr
                                                                                                                                                                                                                                                                                                             SerAspleuSerLeuIleCysLeuLeuGlyTyrSerMetLeuLeuMetValThrCysThr
                                                                                                                                                                                                                                                                                                                           ValTyrAlaIleLysThrArgGlyValProGluThrPheAsnGluAlaLysProIleGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SerGlnSerAlaAspLysLeuTyrIleGlnThrThrThrLeuThrValSerValSerLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2554 CCTGAACTCAATGTCCAGAAACGGAAGCGAAGCTTCAAGGCGGTAGTCACAGCAGCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AY401210
Mus musculus GRM7 gene,
genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AY401210
AY401210.1 GI:39757199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2734 AACCTGGTTATC 2745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AsnHisAlaIle
                          1894
                                                                                                                                                                                                       381
                                                                                                                                                     361
                                                                                                                                                                                                                                                                                   2194
                                                                                                                                                                                                                                                                                                                                                                441
                                                                                                                                                                              2074
                                                                                                                                                                                                                                                          401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
 301
                                                                                                                                                                                                                               2134
                                                                                                                                                                                                                                                                                                                                                                                       2314
                                                                                                                                                                                                                                                                                                                                                                                                                                        2374
                                                   321
                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                  461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AY401210
 ઠે
                       셤
                                                  8
                                                                      셤
                                                                                                   6 6 6
                                                                                                                                                                      Ω
                                                                                                                                                                                              8
                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     윰
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
```

81

61

41

1353

1413

180

셤

ठ

셤 ઠે 유 ठे 8 ò g ठे 셤 ò g õ g

```
Group Phase I & II Team.

Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs

Lof 60,770 full-length cDNAs

Lof 60,770 full-length cDNAs

E (Dasses 1 to 4209)

E (Dasses) 1 to 4209)

E Adachi, J., Aizawa, K., Akimura, T., Hara, A., Hashizume, W.,

Ruda, S., Furuno, M., Harancto, K., Hiraoka, T., Hirozane, T.,

Hayashida, K., Hayateu, N., Hiramoto, K., Hiraoka, T., Kasukawa, T.,

Katoh, H., Kawai, J., Kojima, Y., Itoh, M., Kagawa, I., Kouda, M.,

Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M.,

Nakamura, M., Nishi, K., Nomura, Y., Numazaki, A., Ohno, M., Ohsato, N.,

Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N.,

Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T.,
                                                                                                                                                                                                                                                                                                      AK053447
Mus musculus 0 day neonate eyeball cDNA, RIKEN full-length enriched library, clone:Bl30018M02 product:METAGOTROPIC GLUTAMATE RECEPTOR 7 PRECURSOR homolog [Rattus norvegicus], full insert sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes Genome Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, R., Sayuchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. SHIKBN integrated sequence analysis (RISA) system--384-format Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Research
                                                                                                          2674 CTTTGTGAAAATGTAGACCCAAACAGCCCTGCTGCAAAAAAGAAGTATGTCAGTTATAAT
                        MetSerAsnLysPheThrGlnLysGlyAsnPheArgProAsnGlyGluAlaLysSerGlu
                                                                                   LeuCysGluAsnLeuGluThrProAlaLeuAlaThrLysGlnThrTyrValThrTyrThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The RIKEN Genome Exploration Research Group Phase II Team and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FANTOM Consortium.
Functional annotation of a full-length mouse cDNA collection
Nature 409, 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The FANTOM Consortium and the RIKEN Genome Exploration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Carninci, P. and Hayashizaki, Y.
High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
10349636
                                                                                                                                                                                                                                                                                                                                                                                                            AKO53447.1 GI:26343462
HTC; CAP trapper.
Mus musculus (house mouse)
                                                                                                                                                                                                                  2734 AACCTGGTTATC 2745
                                                                                                                                                                         581 AsnHisAlaIle 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                          AK053447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11076861
541
                                                                                   561
                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
MEDLINE
PUBMED
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PUBMED
                                                                                                                                                                                                                                                                                  AK053447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                             셤
                                                                                                                     셤
                                                                                                                                                                                                                요
                                                                                   ò
                                                                                                                                                                     ठ
                                                                                                                                                                                                                                         1713
                                                                                                                                                                                                                                                                                                                                                                                                                   1833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2613
                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SeralaproArgPhelleSerProAlaSerGlnLeuAlaileThrPhelleLeuileSer 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LeuGlnLeuLeuGlylleCysValTrpPheValValAspProSerHisSerValValAsp 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCAAAGGAGTCCCGGGAGATCCCACTCTGTGTGCACATTGCCATGCAAGCGAG
                                                                                                                                                                                                                                                                                    AsnArgThrSerCysGlnProIleProIleValLysLeuGluTrpAspSerProTrpAla
                                                                                                                                                                                                                                                                                                                                                                                                 TTCATCCGCTACAATGATACACCCATCGTCAGGGCATCTGGGGAACTCAGCTATGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        :::
GTGGCAGTGTGTTCCTTCCGACGTGTCTTTGGGGTTGGGGTATGTGTATTAGTTATGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCCTTTTAACAAAACCAATCGGATTTATCGCATATTCGAGCAGGGCAAGAAATCGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ProGlySerGlyGlnGlnLeuProArgSerIleCysSerLeuProCysGlnProGlyGlu
                                                                                                     ArgivsiysThrValiysGlyMetAlaCysCysTrpHisCysGluProCysThrGlyTyr
                                                                                                                                                AGGAAGAAGACACAGAAGGGAACGCCTTGCTGCTGGACTTGTGAGCCCTGTGATGGATAC
                                                                                                                                                                                              GlnTyrGlnValAspArgTyrThrCysLysThrCysProTyrAspMetArgProThrGlu
                                                                                                                                                                                                                                         cadrarcaarrreargacargacargicaccarrercecrargaccagagececaargae
                                                                                                                                                                                                                                                                                                          ValLeuProLeuPheLeuAlaValValGlyIleAlaAlaThrLeuPheValValThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LeuleuAlaGlyIlePheLeuCysTyrAlaThrThrPheLeuMetIleAlaGluProAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LeuGlyThrCysSerLeuArgArgIlePheLeuGlyLeuGlyMetSerIleSerTyrAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AlaLeuLeuThrLysThrAsnArglleTyrArgllePheGluGlnGlyLysArgSerVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PheGlnAspClnAspThrLeuAspProArgPheAlaArgGlyValLeuLysCysAspIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SerAspleuSerLeulleCysLeuLeuGlyTyrSerMetLeuLeuMetValThrCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        acagaccticagatcatitgtictitgggatatagcatictictcatggicacti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGTATGCCATCAAGACTCGGGGTGTACCAGAGAATTTTAATGAAGCCAAGCCCATTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SerGlnSerAlaAspLysLeuTyrIleGlnThrThrThrLeuThrValSerValSerLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ProGluGlnAsnValProLysArgLysArgSerLeuLysAlaValValThrAlaAlaThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCTGAACTCAATGTCCAGAAACGGAAGCCTACAAGGCCGTAGTGAGCCACCCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                           PheValArgTyrAsnAspThrProIleValLysAlaSerGlyArgGluLeuSerTyrVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ValTyrAlaileLysThrArgGlyValProGluThrPheAsnGluAlaLysProileGly
                                                                                                                                                     1594
                                                                                                                                                                                                                                         1654
                                                                                                                                                                                                                                                                                                                             1714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2434
                    181
                                                               1534
                                                                                                          201
                                                                                                                                                                                              221
                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                          261
                                                                                                                                                                                                                                                                                                                                                                                                                1774
                                                                                                                                                                                                                                                                                                                                                                                                                                                           281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2554
```

6 6 6

8 S 8 ઠે g ઠે 셤 ò g ઠે 음 ò g ઠે a ò

the

```
161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                        g
                                                                                                              ઠે
                                                                                                                                             g
                                                                                                                                                                                               ò
                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     경 음. 경
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ⋧
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6 B 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A., Muramatsu, M. and Hayashizaki, Y. Direct Submission

Lirect Submission

Lister Submission

                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Mus musculus"
/mol_type="mRNA"
/mol_type="mRNA"
/dstain="CS7BL/GJ"
/db_xref="rAxTon" DB:E130018M02"
/db_xref="taxxon:I0090"
/clone="E130018M02"
/clone="E130018W02"
/clone Ibp="RIKEN full-length enriched mouse cDNA library"
/dev_efage="0 day neonate"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /codon_gtart=1
/broteIn_id="BAC35388.1"
/broteIn_id="BAC35388.1"
/broteIn_id="BAC35388.1"
/broteIn_id="BAC35388.1"
/broteIn_id="BAC35388.1"
/broteIn_id="GI:26343463"
/translation="WVD1VKALGWNYVSTLASEGSCGEKGVESFTQISKEAGGLCIAQ
SVRIPQERKDRTIDFDRIIKQLLDTPNSRAVVIFANDEDIKQILAAAKRADQVGHFLW
SVRISGSKGSKINPLHQHEDIAEGAITIOPKRATVEGFDAYFTSRTLENNRRNWFAEYW
EENFNCKTITSGSKKEDTDRKCTGGERSTGKDSNYRDGGSKVQFVIDAVYAMAHALHHMN
KDLCADYRGVCPEMEQAGGKKLLKYIRNVNFNGSAGTPVMFNKNGDAPGRYDICQYQT
TNTTNPGYRLIGQWTDELQLNIEDMQWRGGYREIIPPSVCTLPCKREGQRKKTQKGTPCC
WTCEPCDGYQYQFDEMTCQHCPYDQAQ"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1496 GGACAGGAATTGGAAAAGACTCTAATTATGAGCAGGGTAAAGTACAGTTTGTG 1555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="unnamed protein product; METABOTROPIC GLUTAMATE
RECEPTOR 7 PRECURSOR homolog [Rattus norvegicus]
(SWISSPROT | P35400, evidence: FASTY, 100%ID, 41.6%length,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GlyValSerSerSerLeuProThrArgMetThr---SerGlyPheAspArgTyrPheSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | AsnArgGluArgIleGlyGlnAspSerAlaTyrGluGluGlyLysValGlnPheVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PheHisCysLysLeuSerArgHisAlaLeuLysLysGlySerHisIleLysLysCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   400
72
92
3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             x AK053447 (1-4209)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.53e-210
2156.50
83.39%
70.67%
69.41%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             match=1143)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-828-332-7 (1-584)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local S.
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDS
                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     名
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
```

```
1975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LeuGhleeuLeuGlyIleCygValTrpPheValValAgpProSerHisSerValValAsp 400
:::|||||||||||||||
GTGCAACTTCTAGGTGTTTTGGTTTGGGGTTGACCCACCAACATCATCATAGAC 2513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LeuGlyThrCysSerLeuArgArgIlePheLeuGlyLeuGlyMetSerIleSerTyrAla 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AlaLeuLeuThriysThrAsnArgIleTyrArgIlePheGluGlnGlyLysArgSerVal 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          420
142 AspalaProGlyArgTyrAspIleTyrGlnTyrGlnLeuArgAsn---GlySerAlaGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                          1796 TATCCTCTCATTGGGCAGTGACAGATGAACTGCAGCTCAATATAGAGGACATGCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181 ProGlySerGlyGlnGlnLeuProArgSerIleCysSerLeuProCysGlnProGlyGlu :::::::::||||||||:::|||||||:::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGCAAAGGAGTCCGGGAGATCCCTCTGTGTGCACATTGCCATGCAAGCCTGGGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2154 TICATCGCTACAATGATACACCCATCGTCAGGCCATCTGGGCGGGAACTCAGCTATGTT
                                                                                                                                                                                                                                          1676 ATCCGCAATGTTAACTTCAATGGTAGTGCTGGAACCCCAGTGATGTTAACAAAAATGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCCTTTTAACAAAAACCAATCGGATTTATCGCATATTCGAGGGCGCAAGAAATCGGTG
                                                                                                                                                          GACTACCGGGGGGGGGGCCCAGAATGGAGCAGCAGGGGGCGCAAGAAGTTGTTGAAGTAT
                                                                                                                                                                                                                                                                                                                                                   1736 GATGCTCCAGGACGATATGACATCTTCCAGTACCAGACAAAAACACTACCAATCCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ArgivsivstyrVallysGlyMetAlaCysCysTrpHisCysGluProCysThrGlyTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1916 AGGAAGAAGACACAGAAGGAACCCCTTGCTGCTGCACTTGTGAGCCCTGTGATGGATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1976 CAGTATCAATTTGATGAGATGACATGTCAGCATTGTCCCTATGACC--AGGCCCAATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2034 AACCGAACTGGCTGTCAGAACATCCCAATCATCAACTGAACTGGGACTCCCCCTGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LeuLeuAlaGlyIlePheLeuCysTyrAlaThrThrPheLeuMetIleAlaGluProAsp
                                                                                                      102 GlyArgValGlyLeuCysProArgMetAspProValAspGlyThrGlnLeuLeuLysTyr
                                                                                                                                                                                                               122 IleArgAsnValAsnPheSerGlyIleAlaGlyAsnProValThrPheAsnGluAsnGly
                                                                                                                                                                                                                                                                                                                                                                                                                           TyrLysValileGlySerTrpThrAspHisLeuHisLeuArglleGluArgMetGlnTrp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GlnTyrGlnValAspArgTyrThrCysLysThrCysProTyrAspMetArgProThrGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ValLeuProLeuPheLeuAlaValValGlyIleAlaAlaThrLeuPheValValValThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       :::
GTGGCAGTGTGTTCCTTCCGACGTGTCTTTCTTGGGGTTGGGTATGTGTATTAGTTAAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SerAlaProArgPheIleSerProAlaSerGlnLeuAlaIleThrPheIleLeuIleSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PheGlnAspGlnArgThrLeuAspProArgPheAlaArgGlyValLeuLysCysAspIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AsnArgThrSerCysGlnProlleProlleValLysLeuGluTrpAspSerProTrpAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PheValArgTyrAsnAspThrProlleValLysAlaSerGlyArgGluLeuSerTyrVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TACGATGAGCATAAGACAATGAACCAGAACAAGCCAGGGGGGGTTCTCAAATGTGACATC
```

st Local Sim ery Match: : -10-828-332- -10-828-332- 22 22 22 42 42 42 977 62 1037	Oy B. Inches View V	122	Db 1337 TACCGTCTGGTCGGACGAACTTCAGCTCANNNNNNNNNNN	241 1577 261 1637 281 1697	Oy 301 LetteraladyliePheteucy8iyralainrinrheteumetileaddurfanby 320 1757 CTTTTGACGGCATCTTTCTTTGCTACATCATTTCCTGATGATGCCAAACCAGAT 1816 Oy 321 LeuGlyThrCySerLeuArgarg1lePheLeuGlyMetSerIleSerTyrAla 340 ::: [
41 ValTyralaileLysThrArgGlyValProGluThrPheAsnGluAlaLysProlleGly 460 2634 GTGTATGCCATCAAGACTCGGGGTGTACCAGAGATTTTAATGAAGCCAATGGA 269 461 PheThrMetTyrThrThrCysIleValTrDLeualaPheileProllePheeDlyThr 480 2694 TTCACTATGTACACGACTTGTATGGTTAGCTTGCTTCATCCCAATATTTTTGGCACA 275 481 SerGlnSerAlaAspLysLeuTyrIleGlnThrThrThrIeuThrValSerValSerLeu 500 2754 GGGCAATCAGCACACACACACCACCACACACTTACATATTTTTTGGCACA 281 501 SerAlaSerValSerLeuGlyMetLeuTyrMetProLysValTyrIleIleleuPheHis 520 2814 ACTGCATCAGTGGCGCTGGGATGCAACCACGCTTACAATCTCCATGAACCTA 281 521 ProGluGlnAsnValProLysArgLysArgSerLeuLysAlaValThrAlaAlaThr 540 [Db 2934 ATGTCATCGAGGCTGTCACACACAGGGCCCCAATGGTGAGGCAAAGACAGAA 2993 Qy 561 LeuCygGluAgnLeuGlu 566 Db 2994 CTTTGTGAAATGTAGAC 3011 RESULT 9	Z E	REFERENCE 1 (bases 1 to 2611) AUTHORS Clark,A.G., Glanowski,S., Nielson,R., Thomas,P., Kejariwal,A., Todd,M.A., Tanenbaum,D.M., Civello,D.R., Lu,F., Murphy,B., Ferriera,S., Wang,G., Zheng,X.H., White,T.J., Sninsky,J.J., Adams,M.D. and Cargill,M. TITLE Inferring noneutral evolution from human-chimp-mouse orthologous gene trios JOURNAL Science 302 (5652), 1960-1963 (2003) PUBBMED 14671302 Clark,A.G., Glanowski,S., Nielson,R., Thomas,P., Kejariwal,A., Todd,M.A., Tanenbaum,D.M., Civello,D.R., Lu,F., Murphy,B., Ferriera,S., Wang,G., Zheng,X.H., White,T.J., Sninsky,J.J.,	Addms, M.D. and Cargilli, M. TITLE Direct Submission Cargilli, M. JOURNAL Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive, JOURNAL Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive, Rockville, MD 20850, USA COMMENT This sequence was made by sequencing genomic exons and ordering them based on alignment. FEATURES Location/Qualifiers Source / 2.261 / Mol_type="genomic DNA" / Mol_type="genomic DNA" / Gb xxef="taxon:9598" / Gene="GRN7"	ORIGIN Alignment Scores: 3.6e-209 Length: 2611 Score: 2140.00 Matches: 396 Percent Similarity: 80.14* Conservative: 72

```
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J., Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J., McKernan, K.J., Malek, T.A., Gunaratne, P.H., Richards, S., Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W., Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A., Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S., Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y., Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, B.D., Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M., Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smallus, D.B., Schmerch, A., Schein, J.B., Jones, S.J. and, Marra, M.A., Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: cgapbe-remail.nih.gov
Tissue Procurement: The Cepko Laboratory
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Paraged by: The I.M.A.G.B. Consortium (LLNL)
DNA Sequencing by: Sequencing Group at the Stanford Human Genome
Center, Stanford University School of Medicine, Stanford, CA 94305
Web site:
http://www.shgc.stanford.edu
Contact: (Dickson, Mark) mcd@paxil.stanford.edu
Dickson, M., Schmutz, J., Grimwood, J., Rodriquez, A., and Myers,
R. M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    be found
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Strausberg, R. Direct Submission Submission Submission Submitsed (02-UUL-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clone distribution: MGC clone distribution information can be for through the I.M.A.G.E. Consortium/LiNL at: http://image.llnl.gov Series: IRAK Plate: 44 Row: i Column: 22.
This clone was selected for full length sequencing because it passed the following selection criteria: Hexamer frequency ORF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /tissue type="Eye, retina, mouse strain C57Bl\6"
/clone lib="NIH MGC_94"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                      Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002) 22388257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This clone has the following problem: frame shifted.

Location/Qualifiers

1. 3399
/organism="Mus musculus"
/mol_type="mmsrn"
/db_xref="texon:10090"
/clone="IMAGE:4511841"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3399
371
62
104
4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NIH-MGC Project URL: http://mgc.nci.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="Vector: pCMV-SPORT6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-828-332-7 (1-584) x BC034118 (1-3399)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: MGC help desk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4.14e-197
2025.00
80.04%
68.58%
65.18%
                                                                                                                                                                                                                                                                                                                                              (bases 1 to 3399)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                          2477932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Signery Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment S
Pred. No.:
                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                    MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REMARK
COMMENT
                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                        2176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 bcussile
Mus musculus glutamate receptor, metabotropic 6, mRNA (cDNA clone
IMAGE:4511841), containing frame-shift errors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases I to 3399)
Straubberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Haieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Stapleton, M., Soares, M. B., Bonaldo, M.F., Casavant, T.L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
                                                                                                                                     :::
ACAGNICCCAGACTCATAAGCCCAACAICACAACTGGCAAICACTICCAGIITAAIAIGA 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2357 AGTGCATCAGTGGCGCTGGGGATGCTATACATGCCGAAAGTGTACATCATTTTCCAC 2416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2537 CTCTGTGAAAACGTAGACCCAAAACAGCCCTGCTGCAAAAAAGAAGTATGTCAGTTATAAT 2596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2417 CCTGAACTCAATGTCCAGAAACGGAAGCGAAGCTTCAAGGCGGTAGTCACAGCAGCCACC 2476
                                                                                                                                                                                                                                                                              420
                                                                                                           380
                                                                                                                                                                                                                                                                                                                                                                                                                                                  460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      200
                                                                                                                                                                                                                                                                                                                                                               SerAspleuSerLeuileCysLeuleuGlyTyrSerMetLeuLeuMetValThrCysThr 440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              561 LeuCysGluAsnLeuGluThrProAlaLeuAlaThrLysGlnThrTyrValThrTyrThr 580
                                                                                                                                                                                                                      401 PheGlnAspGlnArgThrLeuAspProArgPheAlaArgGlyValLeuLysCysAspIle
                                                                                                        361 SerAlaProArgPhelleSerProAlaSerGlnLeuAlaIleThrPhelleLeuIleSer
                                                                                                                                                                                         381 LeuGlnLeuLeuGlyIleCysValTrpPheValValAspProSerHisSerValValAsp
                                                                                                                                                                                                                                                                                                    ValTyrAlaIleLysThrArgGlyValProGluThrPheAsnGluAlaLysProIleGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2177 didiaigecarcaagacicegegigiaceagaarritaargaagecaagecearrega
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SerGlnSerAlaAspLysLeulyrIleGlnThrThrThrLeuThrValSerValSerLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | SerAlaSerValSerLeuGlyMetLeuTyrMetProLygValTyrIleIleLeuPheHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ProGluGlnAsnValProLysArgLysArgSerLeuLysAlaValValThrAlaAlaThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WetSerAsnLysPheThrGlnLysGlyAsnPheArgProAsnGlyGluAlaLysSerGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (house mouse)
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BC034118
BC034118.1 GI:21706621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2597 AACCTGGTTATC 2608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 581 AshHisAlaile 584
                                                                                                                                                  1937
                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BC034118
                                                             g
                                                                                                                                           셤
                                                                                                                                                                                                                        ద
                                                                                                        ò
                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ď
                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
```

498

478

1501

1621

1681

```
HTC 19-AUG-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LeuargIleGluargMetGlnTrpProGlySerGlyGlnGlnLeuProArgSerIleCys 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        July (bases 1 to 1400.)
Genoscope
Direct Submission
Submitted (10-AUG-2004) Genoscope - Centre National de Sequencage
Submitted (10-AUG-2004) Genoscope - Centre National de Sequencage
2 rue Gaston Cremieux, CP 5706 - 91057 EVRY cedex - FRANCE
Email: seqref@genoscope.cns.fr - Web : www.genoscope.cns.fr)
The sequences are based on single pass reads.
More information available at http://www.genoscope.cns.fr/tetraodon.
Location/Qualifiers
Location/Qualifiers
                                                                   1442 TGTACGGTGTATGCCATCAAGGCCCGAGGTGTGCCCAGAGACCTTCAATGAAGCCAAGCCC
                                                                                                                                                                                 AGCCTGAGCGCGCGCGCGCTCGGCATGCTCTATGTGCCCAAAACCTACGTCATCCTG
CysThrValTyrAlaIleLysThrArgGlyValProGluThrPheAsnGluAlaLysPro
                                                                                                                                                                                                                                                   GlyThrSerGlnSerAlaAspLysLeuTyrIleGlnThrThrLeuThrValSerVal
                                                                                                                                                                                                                                                                                                                 SerleuSerAlaSerValSerLeuGlyMetLeuTyrMetProLysValTyrIleIleLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1484
240
38
46
29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
                                                    AspileSerAspLeuSerLeuIleCysLeuLeuGlyTy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CR717163 1484 bp mRNA
Tetraodon nigroviridis full-length cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="mRNA"
/db_xref="taxon:99883"
/tissue_type="Eggs"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-828-332-7 (1-584) x CR717163 (1-1484)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.2e-122
1298.50
78.75%
67.99%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCG 1744
                                                                                                                                                                                                                                                                                                                                                                                                                                               539 Ala 539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                1622
                                                                                                                                                                                                                                                                                                                                                                                                                1682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1742
                     1322
                                                    419
                                                                                                                    439
                                                                                                                                                                                    459
                                                                                                                                                                                                                   1502
                                                                                                                                                                                                                                                   479
                                                                                                                                                                                                                                                                                 1562
                                                                                                                                                                                                                                                                                                                 499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 11
CR717163
LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                         qq
                     원 상
                                                                        8 & 8
                                                                                                                                                                          र्व है र्द
                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                      요 요
                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ValThrPheValArgTyrAsnAspThrProlleValLysAlaSerGlyArgGluLeuSer 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TyrValLeuLeuAlaGlyIlePheLeuCysTyrAlaThrThrPheLeuMetIleAlaGlu 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         378
                                                                                                                                   | IleAspAlaValTyrAlaMetGlyHisAlaLeuHisAlaMetHisArgAspLeuCysPro 101
                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                               AspAlaProGlyArgTyrAspIleTyrGlnTyrGlnLeuArgAsnGlySerAlaGlu--- 160
                                                                                                                                                                                                                                                                                                                                                                   601
                                                                                                                                                                                                                                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TrpAlaValLeuProLeuPheLeuAlaValValGlyIleAlaAlaThrLeuPheValVal 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ValAspPheGlnAspGlnArgThrLeuAspProArgPheAlaArgGlyValLeuLysCys 418
                                                                                                   361
                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                  IleargasnValasnPheSerGlyIlealaGlyAsnProValThrPheAsnGluAsnGly 141
                                   301
                                                                     81
                         TITAACTIGCAAACTAACCAGCTCAGGTGGCCAGTCAGATGATTCCACCCGGAAATGCACA
                                                                                    GCGAGGAAGGAACGCATCGGCCAGGACTCCACCTATGAACAGGAGGGGAAGGTGCAGTTCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                17rAlaAlaLeuLeuThrLysThrAsnArgIleTyrArgIlePheGluGlnGlyLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCTGTCACGCCCCCCTTCATCAGCCCCACCTCGCAGCTAGTCATCACCTTCGGCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IleSexLeuGlnLeuLeuGlyIleCysValTrpPheValValAspProSexHisSexVal
                                                                     AsnArgGluArgIleGlyGlnAspSerAlaTyrGluGluGlyLysValGlnPheVal
                                                                                                                                                                                                    GlyArgValGlyLeuCysProArgMetAspProValAspGlyThrGlnLeuLysTyr
                                                                                                                                                                                                                     -----TyrLysVallleGlySerTrpThrAspHisLeuHisLeuArgIleGluArgMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                               GlnTrpProGlySerGlyGlnGlnLeuProArgSerIleCysSerLeuProCysGlnPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GlyTyrGlnTyrGlnValAspArgTyrThrCysLysThrCysProTyrAspMetArgPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ThrGluAsnArgThrSerCysGlnProlleProlleValLysLeuGluTrpAspSerPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTACCTTCATGCGACACACGACACTCCCATAGTCCGCGCCTCTGGCCGTGAGCTTAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ProAspleuGlyThrCysSerLeuArgArgIlePheLeuGlyLeuGlyMetSerIleSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SerValSerAlaProArgPheIleSerProAlaSerGlnLeuAlaIleThrPheIleLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Accricicricia de la compara de la composición del composición de la composición del composición de la c
      PheHisCysLysLeuSerArgHisAlaLeuLysLysGlySerHisIleLysLysCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         379
                                     242
                                                                     62
                                                                                                     302
                                                                                                                                   82
                                                                                                                                                                   362
                                                                                                                                                                                                    102
                                                                                                                                                                                                                                    422
                                                                                                                                                                                                                                                                    122
                                                                                                                                                                                                                                                                                                  482
                                                                                                                                                                                                                                                                                                                                  142
                                                                                                                                                                                                                                                                                                                                                                                                 161
                                                                                                                                                                                                                                                                                                                                                                                                                                 602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1202
      42
                                                                                                                                                                                                                                                                                                                                                                   542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           359
                                                                 8 6
                                                                                                                                                         g
                                                                                                                                                                                                                      යි පි
                                                                                                                                                                                                                                                                                      원 첫
                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    දු දු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ठे हे ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8 8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    සි දි
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ద
                              임
                                                                                                                        ठ
                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
```

```
/dev gtage="1" and 15 days newborn"
//dev gtage="1" is and 15 days newborn"
/lab_host="DH10B (TI phage resistant)"
/clone_lib="NIH BMAP_GM0"
/note="Organ: Brain; Vector: pyx- Asc; Site_l: ECOR I;
Site_2: Not I; The library was constructed according
Bonaldo, Lennon and Soares, Genome Research, 6:791-806,
1996. Denatured RNA was size fractionated on a 1% agarose
gel.First strand cDNA synthesis was primed with oligo-dT
primer containing a Not I site_bouble strand cDNA was size
gel.First containing a Not I site_bouble strand cDNA was size
selected according to mRNA size fraction.ligated with ECOR
I adaptor, digested with NotI and then cloned
directionally into pYx-Asc vector. The library tag
sequence located between the Not I site and the polyA tail
is CGAACTCAT. This library was created for the University
lows Brain Anatomy Project (BMAP): "Gene Discovery in the
Developing Mouse Nervous System", supported by National
Institute of Mental Health (NIMH), Hemin Chin, Ph.D.,
program coordinator."
                                                                                                                                                                                                                                                                                                     Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Trissue Procurement: Dr. Jim Lin, University of Iowa
CDNA Library preparation: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Distribution information can be found at
http://genome.uiowa.edu/distribution/mousefl.html
This clone was contributed by the Brain Molecular Anatomy Project
(BMAR)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTGGTCACTTTTGTGCGCTACAACGACACTCCGATCGTCAAGGCCTCGGGCCGGGAGCTG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                317
                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 782)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    UI-M-GMO-cgc-a-23-0-UI.rl NIH BMAP_GMO Mus musculus cDNA clone
IMAGE:30360694 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ValValThrPheValArgTyrAsnAspThrProlleValLysAlaSerGlyArgGluLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SerTyrValLeuLeuAlaGlyIlePheLeuCysTyrAlaThrThrPheLeuMetIleAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        782
256
1
3
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           db_xref="taxon:10090"
/clone="IMAGE:30360694"
/tissue_type="whole_brain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-828-332-7 (1-584) x CD353576 (1-782)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
1. 782
/organism="Mus muscu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="mRNA"
/strain="C57BL/6"
                                                                                           EST.
Mus musculus (house mouse)
Mus musculus
                                              CD353576
CD353576.1 GI:31146077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.26e-122
1294.00
98.85%
98.46%
41.65%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    pyx-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Seg primer:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  298
                                            ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bource
    DEFINITION
                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear . EST 15-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           978 CATGCATCCCAATCTTATTTGGCACGTCGCAGTCCACAGAAAGGTAAACACACAAA---- 1033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           --- 1033
                                                                                                                                                                                                                                                                                                                                292
                                                 212
                                                                                                                                            232
                                                                                                                                                                                        257
                                                                                                                                                                                                                                       252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LeuGlyMetSerIleSerTyrAlaAlaLeuLeuThrLysThrAsnArg1leTyrArg11e 352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 472
  137
                                                                                           197
                                                                                                                                                                                                                                                                                   317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGGGCATGAGCATCAGTTACGCTGCCTTACCAAAACCAATCGCATTACCGTATT 617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         918 TTCAATGAAGCCTGGCCCGTTGGTTTTACAATGTGCTGCAGCCATGTATTATATTTGGCTGG 977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PheGluGlnGlyLysArgSerValSerAlaProArgPheIleSerProAlaSerGlnLeu 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          373 AlaileThrPhelleLeulleSerLeuGinLeuLeuGlylleCysValrrpPheValVal 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AspProSerHisSerValValAspPheGlnAspGlnArgThrLeuAspProArgPheAla 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            472 laPheileProilePhePheGlyThrSerGlnSerAlaAspLysLeuTyrIleGlnThrT 492
                                                                                                                                                                                                                                                                                                                                                                                                                        273 AlathrLeuPheValValValThrPheValArgTyrAsnAspThrProlleValLysAla 318 GCCACTGTGTGTGGGGGGGTTATCCGCCACAACGACACCCCATTGTTAGGCA
CTAGAGGTCCGGTCGATGCAGTGGCCCGGCGGCATCCGTAAAATCCCTTCCTCAATTTGC
                                         233 ProTyrAspMetArgProThrGluAsnArgThrSerCysGlnProileProileValLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rcaddocidadarita de contrator de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTCATCACCTTCAGCTTGGCCTCAGTGCAGCTGCTTGGTGTATGCATCTGGTTTATCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            258 CGCTTTGATTTGCGACCCAATGAGAATCACACAGGCTGTGTTCCAATCCCTATAGTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SerGlyArgGluLeuSerTyrValLeuLeuAlaGlyIlePheLeuCysTyrAlaThrThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ArgGlyValLeuLysCysAspIleSerAspLeuSerLeuIleCysLeuLeuGlyTyrSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PheLeuMetIleAlaGluProAspLeuGlyThrCysSerLeuArgArgllePheLeuGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MetLeuLeuMetValThrCysThrValTyrAlalleLysThrArgGlyValProGluThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PheAsnGluAlaLysProIleGlyPheThrMetTyrThrT--CysIleValTrpLeuA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       492 hrThrLeuThrValSerValSerLeuSerAlaSerValSerLeuGlyMetLeuTyrMetP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             :::|||||||| :::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    roLysValTyrIleIleLeuPheHisProGluGln 523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CD353576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1033 ----
                                                                                                                                                                                                                                                                                                                                                                               318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    512
                                                                                           138
                                                                                                                                         213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          393
18
                                            193
                                                                                                                                                                                                                                                                                                                                  253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 12
CD353576
LOCUS
                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                   셤
                                                                                                                                     ò
                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                             요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                            ò
                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . අ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   કે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
```

us-10-828-332-7.rst

염

g

ઠે

ò

g

임 ઠે 셤 ò 셤 ઠે 셤 ò g ઠે 셤

ò

```
Genoscope.

Direct Submission

Submitted (12-APR-2000) Genoscope - Centre National de Sequencage : Submitted (12-APR-2000)

BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr - Web : www.genoscope.cns.fr)

This sequence is a single read and was generated as part of a large scale clonne-end sequencing project of the Tetraodon nigroviridis genome. For more information, please take a look at http://www.genoscope.cns.fr/Tetraodon.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AlaargGlyValLeuLysCysAspIleSerAspLeuSerLeuIleCysLeuLeuGlyTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           regeactereaaaacterenteg-taccaetateaagcaganactaacaccnanaaate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LysLeuGluTrpAspSerProTrpAlaValLeuProLeuPheLeuAlaValValGlyIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           272 AlaAlaThrLeuPheValValValThrPheValArgTyrAsnAspThrProlleValLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          847 ATGGCCACCCTGTTTGTGGGTTGCCACTTTGTACGATACAACGACACTCCCATCGTCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ecrrcessriceaeacreaerracercererreacaesearcricerererea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GlyLeuGlyMetSerIleSerTyrAlaAlaLeuLeuThrLysThrAsnArgIleTyrArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCCTAGGTATGAGTATAAGCTATGCCGCACTGCTGACCAAGACCAATCGGATCTACAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         352 IlePheGluGlnGlyLyBArgSerValSerAlaProArgPheIleSerProAlaSerGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ValAspProSerHisSerValValAspPheGlnAspGlnArgThrLeuAspProArgPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TrpHisCysGluProCysThrGlyTyrGlnTyrGlnValAspArgTyrThrCysLysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CysProTyrAspMetArgProThrGluAsnArgThrSerCysGlnProlleVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AlaSerGlyArgGluLeuSerTyrValLeuLeuAlaGlyIlePheLeuCysTyrAlaThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Thr PheLeuMet IleAlaGluProAspLeuGlyThrCysSerLeuArgArgIlePheLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTITIGAGCAGGCAAGATGTCGGTCAGTGCTCCTCGATTTATCTCCCCAGCATCCCAG
                                                                                                                                                                                                                                                                           /clone_lib="B"
/note="Genoscope sequence ID : C1AB006ZF07B1~end
                                                                                                                                                                                                                                                                                                                                                           1051
222
19
34
1
                                                                                                                                                                                             1. .1051
/organism="Tetraodon nigroviridis"
/mol_type="genomic DNA"
/db_xref="taxon:99883"
/clone="034J12"
                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-828-332-7 (1-584) x CNS04TPP (1-1051)
                                                                                                                                                                                                                                                                                                                                                             1.65e-109
1169.00
87.64%
80.73%
37.62%
                 (bases 1 to 1051)
                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
Query Match:
DB:
10899143
                                                                                                                                                                                                                                                                                                                                               Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         412
                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                  %
.:
             REFERENCE
AUTHORS
                                              TITLE
                                                                                                                                                                                                                                                                                                                                               Alignment
PUBMED
                                                                                                                                                                             FEATURES
                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                               DRIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  යු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Пb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-SEP-2000
                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                                                                                                                                                                               900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, etrinopterygii, Neopterygii, Teleostei, Euteleostei, Neoteleostei, Acanthomorpha, Acanthopterygii, Percomorpha, Tetraodontiformes; Tetradontoidea, Tetraodontidae, Tetraodon.
                                                                                                                                               ArgSerValSerAlaProArgPheIleSerProAlaSerGlnLeuAlaIleThrPheIle 377
                                                                                                                                                                                                               397
                                                                                                                                                                                                                                                                              417
                                                                                                                                                                                                                                                                                                                                               437
                                                                                                                                                                                                                                                                                                                                                                                                                457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Roset Crollius, H., Jaillon, O., Dasilva, C., Bouneau, L., Fisher, C., Bernot, A., Fizames, C., Wincker, P., Brottier, P., Quetier, F., Saurin, W. and Weissenbach, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CNSO4TPP 1051 bp DNA linear GSS 01-SEP-
Tetraodon nigroviridis genome survey sequence SP6 end of clone
034012 of library B from Tetraodon nigroviridis, genomic survey
                                                                                                                                                                   CGGTCGGTCACGCCCACGGTTCATCACCCCCGCCTCGCAGCTGGCCATCACCTTCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ValSerLeuSerAlaSerValSerLeuGlyMetLeuTyrMetProLysValTyrIleIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Estimate of human gene number provided by genome-wide analysis using Tetrandon nigroviridis DNA sequence Nat. Genet. 25 (2), 235-238 (2000)
                 GluProAspleuGlyThrCysSerLeuArgArgllePheLeuGlyLeuGlyMetSerIle
                                SerTyrAlaAlaLeuLeuThrLysThrAsnArgIleTyrArgIlePheGluGlnGlyLys
                                                                                                 LeulleSerLeuGlnLeuLeuGlyIleCysValTrpPheValValAspProSerHisSer
                                                                                                                                                                                                                                  CTCATCTCGCTGCAGTTGCTTGGCATCTGCGTGTGGTTCGTGGTGGTGGTGCCCTCCCACTCG
                                                                                                                                                                                                                                                                                ValValAspPheGlnAspGlnArgThrLeuAspProArgPheAlaArgGlyValLeuLys
                                                                                                                                                                                                                                                                                                     GTGGTGGACTTCCCAGGACCAGCGGACACTTGACCCCCGCTTCGCCCGGGGTGTGCTCAAG
                                                                                                                                                                                                                                                                                                                                               CysAspIleSerAspLeuSerLeuIleCysLeuLeuGlyTyrSerMetLeuLeuMetVal
                                                                                                                                                                                                                                                                                                                                                                              rereacarcresacerereserearerecereceseracasearseresere
                                                                                                                                                                                                                                                                                                                                                                                                              ThrCysThrValTyrAlaIleLysThrArgGlyValProGluThrPheAsnGluAlaLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                ACGTGTACTGTGTATGCCATCAAGACTCGAGGCGTGCCTGAGAACCTTCAATGAGGCCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ProlleGlyPheThrMetTyrThrThrCyslleValTrpLeuAlaPhelleProllePhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PheGlyThrSerGlnSerAlaAspLysLeuTyrIleGlnThrThrThrLeuThrValSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GIGAGTCTGAGCGCTTCAGTGTTCCTGGGGATGCTCTACATGCCCANAGTCTACATCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Roest Crollius, H., Jaillon, O., Dasilva, C., Ozouf-Costaz, C., Fizemes, C., Eischer, C., Bouneau, L., Billault, A., Quetier, F., Saurin, W., Bernot, A. and Weissenbach, J. Saurin, W., Bernot, A. and Weissenbach, J. Characterization and repeat analysis of the compact genome of freehwater pufferfish Tetraodon nigroviridis
20359837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AL306790
AL306790.1 GI:8207596
GSS; genome survey sequence.
Tetraodon nigroviridis
Tetraodon nigroviridis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ведиенсе.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10835645
                                                 181
                                                                                                                241
                                                                                                                                                358
                                                                                                                                                                                                                 378
                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                398
                                                                                                                                                                                                                                                                                                                                                 418
                                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                  438
                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              721
                 318
                                                                                338
                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 13
CNSO4TPP/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
```

셤

```
genea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Wacahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                            468
   312
                                                                                                                                                     368
                                                                                                                                                                                 372
                                                                                                                                                                                                               388
                                                                                                                                                                                                                                            432
                                                                                                                                                                                                                                                                          408
                                                                                                                                                                                                                                                                                         428
                                                                                                                                                                                                                                                                                                                                                                  552
                                                                                                                                                                                                                                                                                                                                                                                                 448
                                                                                                                                                                                                                                                                                                                                                                                                                              612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AK032422

3879 bp mRNA linear HTC 03-APR-200.
Was musculus adult male olfactory brain cDNA, RIKEN full-length
enriched library, clones:430542Kl1 product:METABOTROPIC GLUTAWATE
RECEPTOR MGLURS PRECURSOR homolog [Rattus norvegicus], full insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus.
                             IlePheLeuGlyLeuGlyMetSerIleSerTyrAlaAlaLeuLeuThrLysThrAsnArg
                                                                                                            ATCTTCCTGGGACTAGGGATGAGCATCAGCTATGCAGCCCTGCTCCACCAAGACCAACCGC
                                                                                                                                                  lleTyrargilePheGluGlnGlyLysArgSerValSerAlaProArgPheIleSerPro
                                                                                                                                                                                                              AlaSerGlnLeuAlaIleThrPheIleLeuIleSerLeuGlnLeuLeuGlyIleCysVal
                                                                                                                                                                                                                                             geercaeaderesecareacerreasecrearereserseasersersesesearereses
                                                                                                                                                                                                                                                                                                                                    ProArgPheAlaArgGlyValLeuLygCysAspIleSerAspLeuSerLeuIleCysLeu
                                                                                                                                                                                                                                                                                                                                                    CTGGGCTACAGCATGCTGCTCATGGTCACGTGCACCGTGTATGCCATCAAGACACGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ValProGluThrPheAsnGluAlaLysProIle-GlyPheThrMetTyrThrThrTysIl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTGCCCGAGACCTTCAATGAGGCCAAGCCCATTGGGCTTCACCATGTACACCACCACTGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new Genome Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                ATCTACCGCATCTTCGAGCAGGCAAGCGCTCGGTCAGTGCCCCACGCTTCATCAGCCCC
                                                                                                                                                                                                                                                                          ТтрРheValValAврРгоSerHisSerValValAврРheGlnAврGlnArgThrLeuAвр
                                                                                                                                                                                                                                                                                                                                                                                                LeuGlyTyrSerMetLeuLeuMetValThrCysThrValTyrhlaIleLysThrArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGTCTGGCTGGCCTTTCATCCCCATCTTCTTTGGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       eValTrpLeuAla-PheileProilePheGlyThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Carninci, P. and Hayashizaki, Y.
High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
99279253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chordata; (Rodentia; (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AK032422.1 GI:26082838
HTC; CAP trapper.
Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AK032422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11042159
                                                                                                                                                                                                                                                                                                                                                                                                                              553
                                                                                         329
                                                                                                                       253
                                                                                                                                                     349
                                                                                                                                                                                 313
                                                                                                                                                                                                               369
                                                                                                                                                                                                                                            373
                                                                                                                                                                                                                                                                                                                                                                  493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          613
   133
                                 309
                                                           193
                                                                                                                                                                                                                                                                           389
                                                                                                                                                                                                                                                                                                        433
                                                                                                                                                                                                                                                                                                                                       409
                                                                                                                                                                                                                                                                                                                                                                                                429
                                                                                                                                                                                                                                                                                                                                                                                                                                                            449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AK032422
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                       6 B 6
                                                                                                                 g
                                                                                                                                                    δ
                                                                                                                                                                          셤
                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                쉽
                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                       ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                             EST 16-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          H1, H7, and
                            /clone_lib="GRN_ES"
/note="oligo dT_primed, full-length enriched cDNA library
from undifferentiated hBS cell lines H1 (p32), H7 (p29),
and H9 (p26) maintained in feeder-free conditions"
Eukaryogia; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 711)

Brandenberger, R., Wei, H., Zhang, S., Lei, S., Murage, J., Fisk, G.J., Lei, Y., Xu, C., Fang, R., Guegler, K., Rao, M.S., Mandalam, R., Lebkowski, J and Stanton, L.M.

Transcriptome characterization elucidates signaling networks that control human ES cell growth and differentiation

Control brandenberger R.

Contact: Brandenberger R.

Regenerative medicine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ValGly11eAlaAlaThrLeuPheValValValThrPheValArgTyrAsnAgpThrPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ProlleValLysLeuGluTrpAspSerProTrpAlaValLeuProLeuPheLeuAlaVal
                                                                                                                                                                                                                                            mRNA linear EST 16
CDNA 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cell lines
                                                                                                                                                7111
228
2
2
2
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      94025,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /tissue_type="embryonic stem cells, H9"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ర
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  230 Constitution Drive, Menlo Park,
Tel: 650 473 8658
Fax: 650 473 7760
                                                                                                                                                                                                                                          CN409312 711 bp 17000424346609 GRN_ES Homo saplens CN409312 GLN409312.1 GI:47396436 EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: rbrandenberger@geron.com
Insert Length: 711 Std Error:
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (1-711)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-828-332-7 (1-584) x CN409312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6.39e-108
1151.00
98.29%
97.44%
37.05%
                                                                                                                                                                                                                                                                                                                    Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Geron Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        289
                                                                                                                                                                                                                                         LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOUNCE
ORGANISM
                                                                                                                                                                                                            RESULT 14
CN409312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                            Š
                                                   셤
                                                                                      ઠે
                                                                                                                  셤
                                                                                                                                                    ઠ
                                                                                                                                                                             유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
```

us-10-828-332-7.rst

746

806

866

926

632

62

42

692

82

```
1224 GACTIGACAGGIIGIGATITGAICCCAGICCAGIAICTICGAIGGGGIGACCCIGAGCCC 1283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1044 rccaagaaaarraacarcarcagarcregererecagicaaccerereagaaaagacagara 1103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1464 CAGATTTACTGCTACCTTCAGAGAATTGGCATCGGTCTCTCCCAGCCATGAGCTACCA 1523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   103 ArgValGlyLeuCysProArgMetAspProValAspGlyThrGlnLeuLeuLysTyrIle 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   143 AlabroGlyArgTyrAspIleTyrGlnTyr---GlnLeuArgAsnGlySerAlaGluTyr 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               162 LysVallleGlySerTrpThrAspHisLeuHisLeuArgIleGluArgMetGlnTrpPro 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LysLysThrValLysGly---MetAlaCysCysTrpHisCysGluProCysThrGlyTyr 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GlnTyrGlnValAspArgTyrThrCysLysThrCysProTyrAspMetArgProThrGlu 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241 AsnArgThrSerCysGlnProlleProlleValLysLeuGluTrpAspSerProTrpAla 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        261 ValLeuProLeuPheLeuAlaValValGlyIleAlaAlaThrLeuPheValValThr 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        281 PheValArgTyrAsnAspThrProlleValLysAlaSerGlyArgGluLeuSerTyrVal 300
                                                                                                                                                                                                                                                                                                                                                                                                   AspAlaValTyrAlaMetGlyHisAlaLeuHisAlaMetHisArgAspLeuCysProGly 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   123 ArgAsnValAsnPheSerGlyIleAlaGlyAsnProValThrPheAsnGluAsnGlyAsp 142
                                                                                                                                                                                                                                                           |||:::||| ||| ||| :::
533 CAGTGCCGGCTAGAAGGGTTTGCACAGGAAACAGCAAGTACAACAAGACTTGCAACAGT
                                                                                                                                                                                                                                                                                                                                             LeuleuAlaGlyIlePheLeuCysTyrAlaThrThrPheLeuMet,IleAlaGluProAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LeuGlyThrCysSerLeuArgArg1lePheLeuGlyLeuGlyMetSerIleSerTyrAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AlaLeuLeuThrLygThrAsnArg1leTyrArg11ePheGluGlnGlyLysArgSerVal
                                                                                                       514 GGATTACAATCAAGCTCCAGTCTCCTGATGTCAAGTGG-TTTGATGATTATTATCTGAAG
                                                                                                                                                                        HisCysLysLeuSerArgHisAlaLeuLysLysGlySerHisIleLysLysCysThrAsn
                                                                                                                                                                                                                                                                                                                                                                                                                           TATGCAGCCTCTGTGATGCAATGAAGCCAATTGATGGGGGGAAACTTTTGGACTCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATGAAAACCTATACTGGAGTTTCCGGAGATATGATTCTATTTGAAAAATGGAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        182 GlySerGlyGlnGlnLeuProArgSerlleCysSerLeuProCysGlnProGlyGluArg
                                                                   GlyValSerSerLeuProThrArgMetThrSerGlyPheAspArgTyrPheSerSer
                                                                                                                                                                                                                                                                                                                 ArgGluArgIleGlyGlnAspSerAlaTyrGluGlnGluGlyLysValGlnPheValIle
                                                                                                                                                 23 ArgThrLeuAspAsnAsnArgArgAsnIleTrpPheAlaGluPheTrpGluAspAsnPhe
                       US-10-828-332-7 (1-584) x AK032422 (1-3879)
                                                                   ო
                                                                                                                                                                                                                                   43
                                                                                                                                                                                                                                                                                                                                                            693
                                                                                                                                                                                                                                                                                                                                                                                                     83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               321
                                                                                               셤
                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          됝
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                Š
                                                                                                                                                 ò
                                                                                                                                                                                 유
                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             유
                                                                                                                                                                                                                                                                                                                                                                                               Adachi, J., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P., Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W., Fukuda, S., Furuno, M., Hanamoto, K., Hirackar, T., Hirozano, T., Hori, F., Imotani, K., Ishii, Y., Itoh, M., Kagawa, T., Kasukawa, T., Katch, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M., Ohao, M., Ohasuki, Y., Saito, R., Saito, H., Sakai, C., Sakai, K., Sakazume, N., Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sakazume, N., Sogabe, Y., Tangami, M., Tagawa, A., Takahashi, P., Takaku-Akahira, S., Muramatsu, M. and Hayashizaki, Y., Towaru, A., Toya, T., Yasunishi, A., Muramatsu, M. and Hayashizaki, Y., Toya, T., Yasunishi, A., Muramatsu, M. and Hayashizaki, Y., Toya, T., Yasunishi, A., Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /tissue_type="olfactory brain"
/clone_lib="RIKEN full-length enriched mouse cDNA library"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (16-UTL-2001) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 200-0045, Japan (E-mail:genome-rese@gsc.riken.jp, URL:http://genome-gsc.riken.jp/, Tel:81-45-503-9222,
                                                                                                                                                                                                                                                                                               Group Phase I & II Team.
Analysis of the mouse transcriptome based on functional annotation
6 60,70 &101-length cDNAs
Nature 420, 563-573 (2002)
6 (bases 1 to 3879)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKBN. Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                        the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="METABOTROPIC GLUTAMATE RECEPTOR WGLUR5 PRECURSOR homolog [Rattus norvegicus] (SPTR|BAA01711, evidence: FASTY, 98.5%ID, 87%length, match=3058) putative"
                                                                                                                                                                                                                                                                          The FANTOM Consortium and the RIKEN Genome Exploration Research
Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and Hayashizaki,Y. RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                        RIKEN Genome Exploration Research Group Phase II Team and
                                                                                                                                                                                                             annotation of a full-length mouse cDNA collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3879
234
111
202
39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Please visit our web site for further details. URL:http://genome.gsc.riken.jp/.URL:http://fantom.gsc.riken.jp/.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                db_xref="FANTOM_DB:6430542Kll"
db_xref="taxon:10090"
clone="6430542Kll"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /mol_type="mRNA"
/strain="C57BL/6J"
                                                                                                                                                                                                                                   Vature 409, 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          prepare mouse tissues.
Please visit our web a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5.64e-103
1114.50
59.08%
40.07%
35.87%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fax:81-45-503-9216)
                                                                                                                                                                                          FANTOM Consortium.
                                                                                                                                                                                                                 unctional
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
                                                                                                                               11076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Si
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No.:
                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                           TITLE
JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                      JOURNAL
                                                                                                                               PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                     TITLE
                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
```

1403

Search completed: June 21, 2005, 15:45:16 Job time : 5291 secs

This Page Blank (uspto)

Sequence:

Run on:

Searched:

```
APPLICANT: CHAUDHARI, NIRUPA
APPLICANT: CHAUDHARI, NIRUPA
APPLICANT: CHAUDHARI, STEPHEN D.
TITLE OF INVENTION: TTASTE RECEPTOR FOR UMAMI (MONOSODIUM GLUTAMATE) TASTE
FILE REPERENCE: 70373/275576
CURRENT PILING DATE: 2001-03-30
PRIOR PILING DATE: 2000-03-31
NUMBER OF SEQ ID NOS: 14
SOFTHARE: PALENTIN VET. 2.1
SEQ ID NO 1
LENGTH: 2838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Appli
Appli
Appli
Appli
Appli
Appli
Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 GlyValSerSerSerLeuProThrArgMetThr---SerGlyPheAspArgTyrPheSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SerArgThrLeuAspAsnAsnArgAsnIleTrpPheAlaGluPheTrpGluAspAsn
                                                                                               Sequence 11,
                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
Sequence
Sequence
                                         Sequence
                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                  Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                        Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                     Sequence
                                                                                                                                     Sequence
                                                                                                                                                           Sequence
                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
               US-08-604-298-2
US-08-823-110-5
US-08-617-785-11
US-08-617-785-11
US-09-016-434-1118
US-08-452-734A-1
US-08-457-734A-1
US-08-17-785-13
US-08-17-785-13
US-08-617-785-13
US-09-117-785-13
US-09-117-785-13
US-09-126-280-1
US-09-126-280-1
US-09-126-280-1
US-09-126-280-1
US-09-126-280-1
US-09-126-280-1
US-09-126-280-1
US-09-126-280-1
US-08-17-785-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-828-332-7 (1-584) x US-09-820-809-1 (1-2838)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 1, Application US/09820809
Patent No. 6608176
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3050.50
98.97#
98.63#
98.18#
                                                         227245
277245
277245
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
27724
277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                             71.1
70.5
70.5
70.5
70.5
66.1
66.1
665.1
665.0
7.7
7.7
7.7
7.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; TYPE: DNA
; ORGANISM: Re
US-09-820-809-1
                                                       2338
2219 .
22119 .
22110 .
22110 .
22110 .
21911 .
21911 .
2005 .
2005 .
2005 .
                                                                                                                                                                                                                                                                                                                                                                  1865.5
1172.5
1172.5
1172.5
1172.5
11155.5
11155.5
11148.5
11148.5
11148.5
11148.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-820-809-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ..
90
                       Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Command line parameters:
-MODBL=frameters:
-MODBL=frameters:
-MODBL=frameters:
-MODBL=frameters:
-MODBL=frameters:
-MODBL=frameters:
-MODBL=frameters:
-MINMATCH=0.1 -LGOPCL=0
-LGOPEXT=0 -UNITS=Dits -STRAT=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi
-LGOPEXT=0 -UNITS=Dits -STRAT=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR SCORES=DCT -THR MAX=100 -THR MIN=0 -ALIGN=15
-USER=USIOS=LOCAL -OUTFWHT=ptc -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXEN=200000000
-USER=USIOS28312 @CGN 1 1 177 @runat 17062005 170039 7279 -NCPU=6 -ICPU=3
-NO MAAP -LARGEQUERY -NGG SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DBV TIMBCUT=120 -WARN TIMBCUT=30 -THRADS=1 -KGAPPOP=10 -KGAPEXT=0.5 -FGAPOP=6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0, Appli
1, Appli
3, Appli
1074, Ap
14, Appl
20, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Appli
Appli
Appli
                                                                                                                                                     June 21, 2005, 11:28:54; Search time 280 Seconds (without alignments) 3412.806 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 14, A
Sequence 20, A
Sequence 1, Ap
Sequence 3, Ap
Sequence 2, Ap
                                                                                                                                                                                                                                                                      1 MPGVSSSLPTRMTSGFDRYF......LETPALATKQTYVTYTNHAI 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence Sequence Sequence 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       led Patents NA:*
/cgn2_6/ptodata/1/ina/5A_COMB.seq:*
/cgn2_6/ptodata/1/ina/5B_COMB.seq:*
/cgn2_6/ptodata/1/ina/6A_COMB.seq:*
/cgn2_6/ptodata/1/ina/6B_COMB.seq:*
/cgn2_6/ptodata/1/ina/RCTUS_COMB.seq:*
/cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
                                         version 5.1.6
- 2005 Compugen Ltd.
                                                                                                                 nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-617-785-1
US-09-817-464-1
US-09-641-318-1
US-09-641-318-3
US-09-61-318-3
US-09-820-809-14
US-09-820-809-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-820-809-1
PCT-US91-09422-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-855-146-1
US-08-855-146-3
US-08-823-110-2
                                                                                                                                                                                                                                                                                                                                                                                                                             1202784 segs, 818138359 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                          Xgapop 10.0 , Xgapext
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                                       GenCore
Copyright (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       seq length: 0
seq length: 200000000
                                                                                                                                                                                                                              US-10-828-332-7
3107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28938
2736
2736
2736
3431
3884
3321
3321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                            BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3050.5
30050.5
30004.5
30004.5
30004.5
2004.5
2370
2370
2370
2378
                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                    Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
                                                                                                                 OM protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Minimum DB
Maximum DB
```

Database

Result No.

Db 1332 CAGCTGCTCGCGATCTGCGTGTGGTTCGTGGTGGACCCCTCCCACTCGGTGGTGGACTTC 1391 Qy 402 GlnAspGlnArgThrLeuAspProArgPheAlaArgGlyValLeuLy8Cy8AspIleSer 421	Oy 422 AspleuSerLeuIleCysLeuLeuGlyTyrSerMetLeuLeuMetValThrCysThrVal	Qy 442 TyralaileLysThrargGlyValProGluThrPheAsnGluAlaLysProileGlyPhe	462	Qy 482 GlnSerAlaAspLysLeuTyrIleGlnThrThrThrLeuThrValSerValSerLeuSer	Qy 502 AlaSerValSerLeuGlyMetLeuTyrMetProLysValTyrIleIleLeuPheHisPro	Oy 522 GluGlnAsnValProLysArgLysArgSerLeuLysAlaValValThrAlaAlaThrMet	Oy 542 SerAsnLysPheThrGlnLysGlyAsnPheArgProAsnGlyGluAlaLysSerGluLeu	Oy 562 CysGluAsnLeuGluThrProAlaLeuAlaThrLysGlnThrTyrValThrTyrThrAsn	Cy 582 Hishalaile 584	18 Application PC/TUS91 RMATION:	Eileen R. iderick S. Chaled M.	NYGNITON: G PROTEIN-COUPLED GLUIF SCHENCES: 33 SENCE ADDRESS: IE: Townsend and Townsend	STREET: One Market Plaza, Steuart Street lower STATE: California COUNTRY: USA	; ZIP: 94105-1492 ; COMPUTER READABLE FORM: ; MEDIUM TYPE: Floppy disk ; COMPUTER: IBM PC Compatible	; CURRAILLE PATENTIN Release #1.0, Version #1.25 ; CURRENT APPLICATION DATA: ; APPLICATION NUMBER: PCT/US91/09422	; FILING DATE: 19911212 ; CLASSIFICATION: 435 ; PRIOR APPLICATION DATA: ; APPLICATION NUMBER: US 07/672,007	; FILING DATE: 18-MAR-1991 ; PRIOR APPLICATION DATA: ; APPLICATION NUMBER: US 07/648,481
	AsnargGluargIleGlyGlnAspSerAlaTyrGluGlnGluGlyLysValGlnPheVal 	IleaspalavalTyralaMetGlyHisAlaLeuHisAlaMetHisArgAspLeuCysPro 	G1yArgValG1yLeuCysProArgMetAspProValAspG1yThrG1nLeuLeuLysTyr 	122 IleargasnvalasnPheSerGlyIlealaGlyasnProValThrPheAsnGluasnGly 141 	142 AspalaproGlyArgTyrAspileTyrGlnTyrGlnLeuArgAsnGlySerAlaGluTyr 161 					242 ArgThrSerCysGlnProIleProIleValLysLeuGluTrpAspSerProTrpAlaVal 261 	262 LeuProLeuPheLeuAlaValValGlyIleAlaAlaThrLeuPheValValValThrPhe 281 	282 ValargTyrAsnAspThrProlleValLysAlaSerGlyArgGluLeuSerTyrValLeu 301 	302 LeualaGlyllePheLeuCysTyralaThrThrPheLeuMetIlealaGluProAspLeu 321 	322 GlyThrCysSerLeuArgArgllePheLeuGlyLeuGlyMetSerIleSerTyrAlaAla 341 	342 LeuLeuThrLysThrAsnArglleTyrArgllePheGluGlnGlyLysArgSerValSer 361 	362 AlabroArgPheIleSerProAlaSerGInLeuAlaIleThrPheIleLeuIleSerLeu 381 	

1831 GGCATTGCGGGGAACCCTGTAACCTTCAATGAGAACGGAGCCCACGGGGCGCTACGAC 1890 149 IleTyrGlnTyrGlnLeuArgAanGlySerAlacluTyrLy8Vall1eGlySerTrpThr 168 1891 APPH SLeuHi SLeuHi SLEUARGCTCGGCCGGGGTCGTGGACA 1950 169 APPH SLeuHi SLeuHi SLEUARGCTCGGCTCGGGCTCGTGGACA 1950 169 APPH SLEUHI SLEUHI SLEUARGCTCGGCTCGGGGTCGTGGACA 1950 189 ATCTACCACTCGCACTCGCAATAGGCTCGGCGGGGGCGCGCGC	269 ValGlyIleAlaAlaThrLeuPheValValThrPheValArgTyrAsnAspThrPro 288	329	389 TrpPhevalValAspProSerHisSerValValAspPheGlnAspGlnArgThrLeuAsp 408 2611 TGGTTCGTGGTGGACCTCCCACTGGGACTTCCAGGACCTTGAC 2670 409 ProArgPheAlaArgGlJValLeuLy8Cy8AspIleSerAspLeuSerLeuIleCy8Leu 428 2671 TGGTTCGTGGTGGACTCTCAAGTGCGACATCTCCAGGACCTTGAC 2730 2681 CCCGGTTTGCCAGGCGTGCTCAAGTGCGACATCTCGAGACCTCTCTTGCCTG 2730 2731 CTGGGCTACAGCTGCTCAAGTGCGACATCTGGACCTCTCTTTAAGGL 448 2731 CTGGGCTACAGCTGCTGATGGTCACGTGTACTGTGACGCCTCATTTTTTAAGGL 478 2731 CTGGGCTACAGCTGCTGATGGTCAGGTCACGTGTACCCCATCAAGACCGAGGC 2790 449 ValProGluthrPheAsnGluAlaLy8ProIleGlyPheThrMetTyrThrThrCy8Ile 468 11
8 6 8 6 8 6 8 6 8 6 8 8 8 8 8 8 8 8 8 8	8 8 8 8 8	8 6 8 6 8 6 8	8 4 8 4 8 4 8 4 8 8
FILING DATE: 30-JAN-1991 PRIOR APPLICATION DATA: APPLICATION NUMBER: US 07/626,806 FILING DATE: 12-DEC-1990 ATTORNEY/ABENT INFORMATION: NAME: Parmelee, Steven W. REGISTRATION NUMBER: 31,990 REGISTRATION NUMBER: 31,990 FELECOMMUNICATION NUMBER: 13952-6PC TELECOMMUNICATION NUMBER: 13952-6PC TELECOMMUNICATION NUMBER: 18: TELECOMMUNICATION NUMBER: 18: SEQUENCE CHARACTERISTICS: LENGTH: 4095 base pairs TOPOLOGY: linear MOLECILE TYPE: CDNA MOLECILE TYPE: CDNA MMEDIATE SOURCE: CLONE: SN30 FEATURE: LOCATION: 463.3198 PCT-US91-09422-18	Alighment Scores: Pred. No.: Score: Score: Score: 91.67\$ Conservative: 0 Best Local Similarity: 91.67\$ Query Match: 98.18\$ Indels: 1 US-10-828-332-7 (1-584) x PCT-US91-09422-18 (1-4095) Qy MetproGlyValSerSerSerLeuProThrArgMetThrSer	Db 1292 ArGCCAGGGTATCATCATCATCACGAGGATGACATC-AGGAGGGTTTGAGGGT 1350	29 ArgarabanierrphealadiupherrpGluapaanpheHisCyslysleuserarg 4 High

6 6 6

a ò g

```
1347
                                                                                                                                                                                                                               1587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1467
                                                                                                                                                                                          1527
                                                                                                                                                                                                                                                                    1647
                                                                                                                                                                                                                                                                                                                                             1767
                                                                                                                                                                                                                                                                                                                                                                                                                         1887
                                                                                                                                                                                                                                                                                                                                                                                                                                                              1947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2067
                                                                                                                                                                                                                                                                                                                                                                                CIGCCCCTCTTCCTGGCCGTGGTGGCATCGCTGCTGCTTGTTCGTGGTGATCACCTTT 1827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 341
                                                                                                                                                                        181
                                                                                                                                                                                                                                                   221
                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                            321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
AACCGTGAGCGAATTGGGCAGGATTCAGCTTATGAGCAGGAGGGGAAGGTGCAGTTTGTG 122
                   101
                                                                                                                                  161
                                                                                                                                                                                                             201
                                                                                                                                                                                                                                                                                                                            261
                                                                                                                                                                                                                                                                                                                                                                  281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                       LysVallleGlySerTrpThrAspHisLeuHisLeuArglleGluArgMetGlnTrpPro
                                                                                                                                                                                 222 TyrGlnValAspArgTyrThrCysLysThrCysProTyrAspMetArgProThrGluAsn
                                                                                                                                                                                                                                                                                                                            CAGCTGCTGGGCATCTGTGTGTGTGTGTGTGTGGACCCCTCCCACTCGGTGGTGGACTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGGACCAGCGGACCCCCCCCCCCCCAGGGGTGTCTCAAGTGTGTGACTCTCG
                 | IleAspAlaValTyrAlaMetGlyHisAlaLeuHisAlaMetHisArgAspLeuCysPro
                                                                                                                                                                                                                                                                                                                                                                                                      ValArgTyrAsnAspThrProlleValLysAlaSerGlyArgGluLeuSerTyrValLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCCCACGTTCATCAGCCCCGCCTCACAGGTGGCCATCACCTTCAGCCTCATCTCGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GInLeuLeuGly1leCysValTrpPheValValAspProSerHisSerValValAspPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GlnAspGlnArgThrLeuAspProArgPheAlaArgGlyValLeuLysCysAspIleSer
                                                                                                                                                                                                                                                                                                                                                                  LeuProLeuPheLeuAlaValGlyIleAlaAlaThrLeuPheValValValThrPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            362 AlaProArgPheIleSerProAlaSerGlnLeuAlaIleThrPheIleLeuIleSerLeu
                                      1228
                                                                                                                                                      1408
                                                                                                                                                                                                                                 1528
                                                                                                                                                                                                                                                                                                                                               1708
                                                                                                                                                                                                                                                                                                                                                                                      1768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2248
                    82
                                                         102
                                                                           1288
                                                                                                                                    142
                                                                                                                                                                         162
                                                                                                                                                                                                                                                                                                                                                                   262
                                                                                                                                                                                                                                                                                                                                                                                                        282
                                                                                                                                                                                                                                                                                                                                                                                                                                             302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
 6 8
                                8 % 8
                                                                                      8 6 8 6
                                                                                                                                                                  8 6 8 6
                                                                                                                                                                                                                                              8 8 8
                                                                                                                                                                                                                                                                                                      8 8 8 8
                                                                                                                                                                                                                                                                                                                                                                                원 수 명
                                                                                                                                                                                                                                                                                                                                                                                                                                       8 6 8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8 8 8 8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                            RESULT 3
US-08-617-785-1
i Sequence 1, Application US/08617785E
j Patent No. 6228610
j GENERAL INFORMATION:
j APPLICANT: Hor, Renier
j APPLICANT: Lindaur, Kristen
j APPLICANT: Lindaur, Kristen
j APPLICANT: Lindaur, Kristen
j APPLICANT: Lindaur, Kristen
j APPLICANT: Lindaur, HARG, HAR7) and Related DNA Compounds
j TITLE OF INVENTION: HAR6, HAR7) and Related DNA Compounds
j TITLE OF INVENTION: HAR6, HAR7)
j FILE REFERENCE: 4-19579/A/PCT
j CURRENT APPLICATION NUMBER: US/08/617,785E
j CURRENT FILING DATE: 1994-09-07
j EARLIER FILING DATE: 1994-09-07
j EARLIER FILING DATE: 1994-09-07
j EARLIER FILING DATE: 1993-09-20
j SEALIER FILING DATE: 1993-09-20
j NUMBER OF SEO ID NOS: 26
j SOFTWARE: PatentIN Ver. 2.0
j SEO ID NO 1
j LENGTH: 2736
           LeuTyrMetProLysValTyrIleIleLeuPheHisProGluGlnAsnValProLysArg 528
                                               LysargSerLeuLysalaValThralaalaThrMetSerAsnLysPheThrGlnLys 548
                                                                                               GlyAsnPheArgProAsnGlyGluAlaLysSerGluLeuCysGluAsnLeuGluThrPro 568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GlyValSerSerSerLeuProThrArgMetThr---SerGlyPheAspArgTyrPheSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABDATGG1UATG11eG1yG1DABDSerAlaTyrG1uG1nG1uG1yLyBVa1G1DPheVa1
                                                                                                                          AlaLeuAlaThrLysGlnThrTyrValThrTyrThrAsnHisAlaIle 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2736
564
6
12
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-828-332-7 (1-584) x US-08-617-785-1 (1-2736)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3004.50
97.77%
96.74%
96.70%
                                                                                                                                                                                                                                                                                                                                                                                                                           ; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(2736)
US-08-617-785-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
Pred. No.:
                                                                   3031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1048
                              2971
                                                                                                                            269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ٣
                                                                                                         3091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22
                                                529
                                                                                     549
                                                                                                                                             3151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        62
```

8 a ઠ 8 & g

81

19

41

21

141

121

```
1288 GGCCGCGTGGGGCTGTGCCCGCGTGGACCCTGTAGATGGCACCCAGCTGCTTAAGTAC 1347
                                                                                                                                                                                                                                                                                                                                                                                                                                           1648 TACCAGGIGGACCGCTACACCTGTAAGACGTGTCCCTATGACATGCGGCCCACAGAGAAC 1707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AACCGIGAGCGAATIGGGCAGGATICAGCTTATGAGCAGGAGGGGGAAGGTGCAGTTTGTG 1227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         142 AspAlaProGlyArgTyrAspIleTyrGlnTyrGlnLeuArgAsnGlySerAlaGluTyr 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         162 LysValileGlySerTrpThrAspHisLeuHisLeuArglleGluArgMetGlnTrpPro 181
                                                                                                                                                           SerArgThrLeuAspAsnAsnArgArgAsnIleTrpPheAlaGluPheTrpGluAspAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1528 GGAGCGGGCAGCAGCTGCCCCGCTCCATCTGCAGCCTGCCCTGCCAACCGGGTGAGCGG
                            GlyValSerSerLeuProThrArgMetThr---SerGlyPheAspArgTyrPheSer
                                                                                                                                                                                                                          AshArgGluhrgIleGlyGlnAspSerAlaTyrGluGlnGlnGlyLysyaYalGlnPheval
                                                                                                                                                                                                                                                                                                                                                            GlyArgValGlyLeuCysProArgMetAspProValAspGlyThrGlnLeuLeuLysTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GlySerGlyGlnGlnLeuProArgSerIleCysSerLeuProCysGlnProGlyGluArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TyrGlnValAspArgTyrThrCysLysThrCysProTyrAspMetArgProThrGluAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1768 CIGCCCCTTTCCTGGCCGTGGTGGGCGATCGCTGCTGCTGTTGTTCGTGGTGATCACCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LeuAlaGlyIlePheLeuCysTyzAlaThrThrPheLeuMetIleAlaGluProAspLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGGCAGCATCTTCCTGTGCTATGCCACCTTCCTCATGATCGCTGAGCCCGACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LeuLeuThrLysThrAsnArg11eTyrArg11ePheGluG1nG1yLysArgSerValSer
                                                                                                                                                                                                                                                                                                                                                                                                                          IleArgAsnValAsnPheSerGlyIleAlaGlyAsnProValThrPheAsnGluAsnGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ArgThrSerCygGlnProlleProlleValLygLeuGluTrpAspSerProTrpAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2008 CTGCTCACCAAGACCAACCGCATCTACCGCATCTTCGAGCAGGGCAAGCGCTCGGTCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LeuProLeuPheLeuAlaValValGlyIleAlaAlaThrLeuPheValValThrPhe
US-10-828-332-7 (1-584) x US-09-817-464-1 (1-2736)
                                                                                                                                                                                             1108
                                                                                                                                                                                                                                                             1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1828 (
                                                                                              22
                                                                                                                                                              42
                                                                                                                                                                                                                             62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1888
                                6
                                                              988
                                                                                                                                                                                                                                                                                                                                                            102
                                                                                                                                                                                                                                                                                                                                                                                                                          122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      342
                                                    6 ይ
                                                                                                                        g
                                                                                                                                                           ઠે
                                                                                                                                                                                    윱
                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                쥠
                                                                                                                                                                                                                                                                                                                                                  රු පි
                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                              ò
                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               $ B &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Flor, Peter J.
APPLICANT: Kuhn, Ranier
APPLICANT: Kuhn, Ranier
APPLICANT: Lindaur, Kristen
APPLICANT: Lindaur, Kristen
APPLICANT: Lindaur, Kristen
APPLICANT: Puttner, Irene
TITLE OF INVENTION: Human Metabotropic Glutamate Receptor Subtypes (HMR4,
ITILE OP INVENTION: Human Metabotropic Glutamate Receptor Subtypes
ITILE OP INVENTION: Human Metabotropic Glutamate Receptor Subtypes
ITILE OP INVENTION: Human Metabotropic Glutamate Receptor
CURRENT APPLICATION NUMBER: US/09/817,464
CURRENT APPLICATION NUMBER: US/08/617,785
EARLIER APPLICATION NUMBER: BPO 9416553.7
EARLIER PILING DATE: 1996-03-19
EARLIER PILING DATE: 1993-09-20
NUMBER OF SEQ ID NOS: 26
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO SEQ ID NO 1
LENGTH: 2736
TUBNICH STANDARE: NUMBER: NUMB
             2547
                                                                                                               2427
                                                                                                                                                                                                                                                                                                           2607
                                                                                                                                                                              2487
                                                                                                                                                                                                                                                                                                                                                                           2667
                                                                                                                                                                                                                                                                                                                                                                                                                                           2727
                                                                               481
                                                                                                                                             501
                                                                                                                                                                                                              521
                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                           561
                                                                                                                                                                                                                                                                                                                                                                                                           581
                                                                                                                                                                                                                                                                                                                                                                                                        ThrMetTyrThrThrCyg1leValTrpLeuAlaPhe11ePro11ePhePheGlyThrSer
                                                                                                ACCATGTACACCACTTGCATCGTCTGGCTTCATCCCCCATCTTCTTTGGCACCTCG
                                                                                                                                          GlnSerAlaAspLysLeuTyrIleGlnThrThrThrLeuThrValSerValSerLeuSer
                                                                                                                                                             GluGlnAsnValProLysArgLysArgSerLeuLysAlaValValThrAlaAlaThrMet
                                                                                                                                                                                                                                                                                           GAGCAGAAAGGCCCAAGCGCAAGCCCTCAAAGCCGTCGTTACGGCGGCCCATG
                                                                                                                                                                                                                                                                                                                                           SerAsnLysPheThrGlnLysGlyAsnPheArgProAsnGlyGluAlaLysSerGluLeu
                                                                                                                                                                                                                                                                                                                                                               2736
564
6
12
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; Sequence 0, Application US/09817464; Patent No. 6515107; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3004.50
97.77%
96.74%
96.70%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2728 CATGCAATC 2736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HisAlaile 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(2736)
US-09-817-464-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 4
US-09-817-464-1
                                                                                                            2368
                                                                                                                                                                          2428
                                                                                                                                                                                                                                          2488
                                                                                                                                                                                                                                                                                                         2548
                                                                                                                                                                                                                                                                                                                                                                           2608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          582
                                                                            462
                                                                                                                                            482
                                                                                                                                                                                                            502
                                                                                                                                                                                                                                                                           522
                                                                                                                                                                                                                                                                                                                                           542
                                                                                                     g
                                                                                                                                        δ
                                                                                                                                                                   g
                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                 g
               ઠે
                                        요
                                                                     ઠે
                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 유
```

1587

201

1767

261

241

1827

281

1947

321

2007

341

2067

Θ

```
1373 ATCCGAAACGTCAACTTCTCAGGCATCGCAGGGAACCCTGTGACCTTCAATGAGAATGGA 1432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1073 AGCCGCACGCTGGACAACAACGGCGCAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC 1132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             82 ileAspAlaValTyrAlaMetGlyHisAlaLeuHisAlaMetHisArgAspLeuCysPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATCGATGCCGTGTACGCCATGGGCCACGCGTTGCACGCCATGCACCGTGACCTGTGTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1313 GGCCGCGTGGGCCTCTGCCCGCGCATGGACCCTGTAGATGGCACCCAGCTGCTTAAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1433 GATGCGCCTGGGCGCTATGACATCTACCAATACCAGCTGCGCAACGATTCTGCCGAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1493 AAGGTCATTGGCTCCTGGACTGACCACCTGCACCTTAGAATAGAGCGGATGCACTGGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AsnArgGluArgIleGlyGlnAspSerAlaTyrGluGluGlyLysValGlnPheVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GlyargValGlyLeuCysProArgMetAspProValAspGlyThrGlnLeuLeuLysTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AspAlaProGlyArgfyrAspIleTyrGlnfyrGlnLeuArgAsnGlySerAlaGluTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LysValileGlySerTrpThrAspHisLeuHisLeuArgIleGluArgMetGlnTrpPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SerkrgThrLeudapdandandrgArgdanlleTrpPheAlaGluPheTrpGludapdan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PheHisCysLysLeuSerArgHisAlaLeuLysLysGlySerHisIleLysLysCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                122 IleArgAsnValAsnPheSerGlyIleAlaGlyAsnProValThrPheAsnGluAsnGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GlyValSerSerSerLeuProThrArgMetThr---SerGlyPheAspArgTyrPheSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3431
564
6
112
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-828-332-7 (1-584) x US-09-641-318-1 (1-3431)
FILING DATE: 18-Aug-2000
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/816,178A
FILING DATE: 12-MAR-1997
ATTORNEY/AGENT INFORMATION:
                                                                                          REGISTRATION NUMBER: 36,808
REFERENCE/DOCKET NUMBER: X-10579
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                     LOCATION: 26..2761
SEQUENCE DESCRIPTION: SEQ ID NO: 1:
                                                                                                                                                                 TELEPHONE: (317) 276-0756
TELEX: (317) 276-0756
TELEX: (317) 276-3861
INPORMATION FOR SEQ ID NO: 1.
SEQUENCE CHARACTERISTICS:
LENGTH: 3431 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
3004.50
97.77%
96.74%
96.70%
                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                 FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-641-318-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                &
                                                                                                                                      2187
                                                                                                                                                                                                                 2247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGCAGAACGTGCCCAAGCGCAAGCGCAGCCTCAAAGCCGTCGTTACGGCGGCCACCATG 2607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2608 TCCAACAAGTTCACGCAGAAGGGCAACTTCCGGCCCAACGAGAGGCCAAGTCTGAGCTC 2667
                                                                                                                                                                                                                                                                                                                                                                                                                                2368 ACCATGTACACCACTTGCATCGTCGCTGGCCTTCATCCCCATCTTCTTTGGCACCTCG 2427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2668 TGCGAGAACCTTGAGGCCCCCAGCGCTGGCCACCAACAACAGACTTACGTCACTTACACCAAC 2727
                                                                                                                                                                                                                                                                                        GACCTGTCGCTCATCTGCCTGCTGGGCTACAGCATGCTGCTCATGGTCACGTGCACCGTG 2307
                                                                                                                                                                                                                                                                                                                                                                     2308 TATGCCATCAAGACACGCGGCGTGCCCGAGACCTTCAATGAGGCCAAGCCCATTGGCTTC 2367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGTCGGCCGACAAGCTGTACATCCAGACGACGACGCTGACGGTCTCGGTGAGTCTGAGC 2487
                                                                                                  401
                                                                                                                                                                                                                                                        441
                                                                                                                                                                                                                                                                                                                                 461
                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GlnSerAlaAspLysLeuTyrIleGlnThrThrThrLeuThrValSerValSerLeuSer 501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AlaSerValSerLeuGlyMetLeuTyrMetProLygValTyrIleIleLeuPheHisPro 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GluGlnAsnValProlysArglysArgSerLeuLysAlaValValThrAlaAlaThrMet 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SerAsniysPheThrGlnLysGlyAsnPheArgProAsnGlyGluAlalysSerGluLeu 561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CysGluAsnLeuGluThrProAlaLeuAlaThrLysGlnThrTyrValThrTyrThrAsn 581
                                                                                                                                                                             GlnAspGlnArgThrLeuAspProArgPheAlaArgGlyValLeuLysCysAspIleSer 421
                                               GCCCCACGCTTCATCAGCCCCGCCTCACAGCTGGCCATCACCTTCAGCCTCATCTCGCTG
                                                                                                                        CAGCTGCTGGGCATCTGTGTGTGTGTGTGGACCCCTCCCACTCGGTGGTGGTGCTTC
                                                                                                                                                                                                   CAGGACCACGGGACACTCGACCCCCGCTTCGCCAGGGGTGTGCTCCAAGGGTGTGACATCTCG
                                                                                                                                                                                                                                                                                                                             TyrAlailelysThrArgGlyValProGluThrPheAsnGluAlaiysProileGlyPhe
                                                                                                                                                                                                                                                                                                                                                                                                       ThrMetTyrThrThrCysIleValTrpLeuAlaPheIleProIlePhePheGlyThrSer
                                                                                                  GlnLeuLeuGlyIleCysValTrpPheValValAspProSerHisSerValValAspPhe
                           AlaProArgPheIleSerProAlaSerGlnLeuAlaIleThrPheIleLeuIleSerLeu
                                                                                                                                                                                                                                                      422 AspleuSerLeuIleCysLeuLeuGlyTyrSerMetLeuLeuMetValThrCysThrVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: EXCITATORY AMINO ACID RECEPTOR PROTEIN AND RELATED NUCLEIC ACID COMPOUNDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/641,318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSEE: LILLILY AND COMPANY
STREET: LILLY CORPORATE CENTER
CITY: INDIANAPOLIS
STATE: INDIANAPOLIS
COUNTRY: UNITED STATES OF AMERICA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1, Application US/09641318
Patent No. 6384205
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: BELAGAJE, RAMA M.
WU, SU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2728 CATGCAATC 2736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     582 HisAlaIle 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 46285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-641-318-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              562
                                                                                                                                                                               402
                                                                                                                                                                                                                                                                                            2248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2548
                                                               2068
                                                                                                                                          2128
                                                                                                                                                                                                                   2188
                                                                                                                                                                                                                                                                                                                                 442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          522
                           362
                                                                                                    382
                                                                                                                                                                                                                                                                                                                                                                                                            462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               502
```

ą

8 셤 ò

ద ઠે 셤 જે 셤 ठे

셤 ઠ 셤 ે g

ద

ઠે

ઠ

셤

요 ò a

ò

1312

101

1192

61

41

1252

81

1372

121

141

1492

161

1552

```
2693 TGCGAGAACCTTGAGGCCCCAGCGCTGGCCACCAAACAGACTTACGTCACTTACACCCAAC 2752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1013 GGUGCUGUCACGAUCCUCCCCAAGAGGAUGUCCGUACGAAGGCCUUCGACCGCACGUCCCC 1072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           562 CysGluhsnLeuGluThrProAlaLeuhlaThrLysGlnThrTyrValThrTyrThrAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SerargThrLeudapdandandargdagn11eTrpPheAlaGluPheTrpGludapdan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PheHisCyslysLeuSerArgHisAlaLeuLysLysGlySerHisIleLysLysCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 GlyValSerSerLeuProThrArgMetThr---SerGlyPheAspArgTyrPheSer
                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: EXCITATORY AMINO ACID RECEPTOR PROTEIN
AND RELATED NUCLBIC ACID COMPOUNDS
NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSE: ELI LILLY AND COMPANY
STREET: LILLY CORPORATE CENTER
CITY: INDIANAPOLIS
STATE: INDIANA
COUNTRY: UNITED STATES OF AMERICA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.3
CURRENT APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US/08/816,178A
FILING DATE: 12-MAR-1997
ATTORNEY/AGRATI INFORMATION:
NAMME: GAYLO, PAUL J.
REGISTRATION NUMBER: 36,808
REFERENCE/DOCKET NUMBER: X-10579
TELECOWMUNICATION INFORMATION:
TELECOWMUNICATION INFORMATION:
TELECOWMUNICATION INFORMATION:
TELECOWMUNICATION INFORMATION:
TELECOWMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION FOR SECULOR INFORMATION FOR SECUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3431
564
6
12
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-828-332-7 (1-584) x US-09-641-318-3 (1-3431)
                                                                                                                                                                                                                                                                       APPLICANT: BELAGAJE, RAMA M.
WU, SU
TITLE OF INVENTION: EXCITATORY AMINO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NO: 3:
                                                                                                                                                                                                          Sequence 3, Application US/09641318
Patent No. 6384205
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: MRNA
SEQUENCE DESCRIPTION: SEQ ID
US-09-641-318-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
3004.50
97.77%
96.74%
96.70%
                                                                                                                         2753 CATGCAATC 2761
                                                                                HisAlaile 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score:
Percent Similarity:
Best Local Similarity:
Query Match:
3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
Pred. No.:
                                                                                                                                                                   RESULT 6
US-09-641-318-3
                                                                                  582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22
  ò
                                셤
                                                                                  ò
                                                                                                                 පු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                 2392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1673 TACCAGGTGGACCGCTACACCTGTAAGACGTGTCCCTATGACATGCGGCCCACAGAGAAC 1732
                                                                                                                                                                                                            1793 CTGCCCCTCTTCCTGGCCGTGGTGGGCATCGCTGCCACGTTGTTCGTGGTGATCACCTTT 1852
                                                                                                                                                                                                                                                                                                                                                                                 2153 CAGCTGCTGGGCATCTGTGTGTGTGTGTGGTGGACCCCTCCCACTCGGTGGTGGACTTC 2212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2213 CAGGACCAGCGGACACTCGACCCCCGCTTCGCCAGGGGTGTGCTCAAGTGTGACATCTCG 2272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2273 GACCTGTCGCTCATCTGCCTGCTGGGCTACACAGCATGCTCATGGTCACGTGCACGTG 2332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1973 GGCACCTGCTCCCCCGAATCTTCCTGGGACTAGGGATGAGCATCAGCTATGCAGCC 2032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2093 GCCCCACGCTTCATCAGCCCCCCCCCACACCTCACCTTCAGCCTCATCTCGCTG 2152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2513 GCCTCGGTGTCCCTGGGAATGCTCTACATGCCCAAAGTCTACATCATCCTCTTCCACCCG 2572
                                                                                                      241
                                                                                                                                                                                      261
                                                                                                                                                                                                                                                                         281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  401
                                                                                                                                                                                                                                                                                                                                                       282 ValArgTyrAsnAspThrProlleValLysAlaSerGlyArgGluLeuSerTyrValLeu 301
                                                                                                                                                                                                                                                                                                                                                                                                                                          LeualaGlyIlePheLeuCysTyrAlaThrThrPheLeuMetIleAlaGluProAspLeu 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GlyThrCysSerLeuArgArg1lePheLeuGlyLeuGlyMetSerIleSerTyrAlaAla 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      442 TyralaileLysThrArgGlyValProGluThrPheAsnGluAlaLysProIleGlyPhe 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ThrWetTyrThrThrCys1leValTrpLeuAlaPheIleProIlePheBlyThrSer 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AlaSerValSerLeuGlyMetLeuTyrMetProLy8ValTyrIleIleLeuPheHi8Pro 521
                                                                                                    222 TyrGlnValAspArgTyrThrCysLysThrCysProTyrAspMetArgProThrGluAsn
                                                                                                                                                                                                                                                                       LeuProLeuPheLeuAlaValValGlyIleAlaAlaThrLeuPheValValValThrPhe
                                                                                                                                                                                    242 ArgThrSerCysGlnProlleProlleValLysLeuGluTrpAspSerProTrpAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2333 TATGCCATCAAGACACGCGGGGGGGGCGAGACCTTCAATGAGGCCAAGGCCCATTGGGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GlnSerAlaAspLysLeuTyrIleGlnThrThrThrLeuThrValSerValSerLeuSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGTCGGCCGACAAGCTGTACATCCAGACGACGACGCTGACGGTCTCGGTGAGTCTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AlaProArgPheIleSerProAlaSerGlnLeuAlaIleThrPheIleLeuIleSerLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GinLeuLeuGlyIleCysValTrpPheValValAspProSerHisSerValValAspPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GlnAspGlnArgThrLeuAspProArgPheAlaArgGlyValLeuLysCysAspIleSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AspleuSerLeulleCysLeuLeuGlyTyrSerMetLeuLeuMetValThrCysThrVal
                                                                                                                                                                                                                                                                       262
                                                                                                                                                                                                                                                                                                                                                                                                                                          302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            502
                                                                                                                                                                                                                중 음
                   ઠે
                                                    윱
                                                                                               ò
                                                                                                                                a
                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                       ద
                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                성 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
```

41

481

2512

501

2572

521

2632

541

2692

561

2752

```
UAUGCCAUCAAGACACAGCGGCGGCCGAGACCUUCAAUGAGGCCAAUGGCCAUUG
                                                                                                                                                                                                                                                                    CAGUCGGCCGACAAGCUGUACAUCCAGACGACGACGCUGACGGUCUCGGUGAGGUCUGAGC
                                                                                                                                                                                                                                                                                                                 TyralaileLysThrargGlyValProGluThrPheAsnGluAlaLysProlleGlyPhe
                                                                                                                                                                 ThrMetTyrThrTysThrCys1leValTrpLeuAlaPheIleProIlePheGlyThrSer
                                                                                                                                                                                        ACCAUGUACACCACUUGCAUCGUCUGGCUGGCCUUCAUCCCCAUCUUUGGCACCUCG
                                                                                                                                                                                                                                           GlnSerAlaAspLysLeuTyrIleGlnThrThrThrLeuThrValSerValSerLeuSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CysGluAsnLeuGluThrProAlaLeuAlaThrLysGlnThrTyrValThrTyrThrAsn
                                                                                                                                                                                                                                                                                                                                                                                           GluGlnAsnValProLysArgLysArgSerLeuLysAlaValValThrAlaAlaThrMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SerAsnLysPheThrGlnLysGlyAsnPheArgProAsnGlyGluAlaLysSerGluLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 7
US-09-016-434-1074

i Sequence 1074, Application US/09016434

j Patent No. 6500938

i GRNERAL INFORMATION:
APPLICANT: Janice Au-Young

APPLICANT: Jeffrey J. Sellhamer

ITILE OF INVENTION: COMPOSITION FOR THE DETECTION OF SIGNALING

ITILE OF INVENTION: PATHWAY GENE EXPRESSION
NUMBER OF SEQUENCES: 1490

CORRESPONDENCES: 1077

STREET: 3174 PORTER DRIVE

CITY: PALO ALTO

STATE: CALIFORNIA

COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE: FIOPPY disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Word Perfect 6.1 for Windows/MS-DOS 6.2
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/016,434
FILING DATE: HEREWITH
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING APPLICATION:
ATCASSIFICATION:
ATCASSIFICATION:
ATCASSIFICATION:
ATCASSIFICATION:
REGISTRATION NUMBER: 37,071
REGISTRATION NUMBER: 37,071
REGISTRATION NUMBER: BA-0002 US
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAUGCAAUC 2761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZIP: 94304
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       582 HisAlaile 584
                                                    2273
                                                                                                                                                                                                        2393
                                                                                                                                                                                                                                                                                2453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2633
                 422
                                                                                           442
                                                                                                                                                                   462
                                                                                                                                                                                                                                             482
                                                                                                                                                                                                                                                                                                                                                                                           522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 562
                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                    8 S
                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                 5 8
                                                                                     ò
                                                                                                                원장
                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                               1312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2212
                                                                                                                                                                                                                                                                                                   AUCCGAAACGUCAACUUCUCAGGCAUCGCAGGGAACCCUGUGACCUUCAAUGAGAAUGGA 1432
                                                                                                                                                                                                                                                                                                                                                        1732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2272
1133 UUCCACUGCAAGCUGAGCCGCCACGCCCUCAAGAAGGGCAGCCACGUCAAGAAGUGCACC 1192
                                                                                                                                                                                                                         Geccecedes de contra de co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     guececuacaaceacaceccauceucaaeeccuceeeccueaacueaecuaceue 1912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AlaProArgPheIleSerProAlaSerGlnLeuAlaIleThrPheIleLeuIleSerLeu 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                          | IleAspAlaValTyrAlaMetGlyHisAlaLeuHisAlaMetHisArgAspLeuCysPro 101
                                                                                                                                                                                                                                                                                                                                        161
                                                                                                                                                                                                                                                                                                                                                                                                                LysValIleGlySerTrpThrAspHisLeuHisLeuArgIleGluArgMetGlnTrpPro 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LysLysThrValLysGlyMetAlaCysCysTrpHisCysGluProCysThrGlyTyrGln 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ValargTyrasnAspThrProIleValLysAlaSerGlyArgGluLeuSerTyrValLeu 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUCGAUGCCGUGUACGCCAUGGGCCACGCGCUGCACGCCCAUGCACCGUGACCUGUGUCCC
                                                                                                                                                                                    GlyArgValGlyLeuCysProArgMetAspProValAspGlyThrGlnLeuLvsTyr
                                                                                                                                                                                                                                                              IleArgAsnValAsnPheSerGlyIleAlaGlyAsnProValThrPheAsnGluAsnGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TyrGlnValAspArgTyrThrCysLysThrCysProTyrAspMetArgProThrGluAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CUGCCCCUCUUCCUGGCCGUGGUGGCCAVCGCCACGUUGUUCGUGGUGAUCACCCUUU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GlnLeuLeuGlyIleCysValTxpPheValValAspProSerHisSerValValAspPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AspalaProGlyArgTyrAspileTyrGlnTyrGlnLeuArgAsnGlySerAlaGluTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               UACCAGGUGGACCGCUACACCUGUAAGACGUGUCCCUAUGACAUGGCGGCCCACAGAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ArgThrSerCysGlnProIleProIleValLysLeuGluTrpAspSerProTrpAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LeuProLeuPheLeuAlaValGlyIleAlaAlaThrLeuPheValValThrPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    YThrCysSerLeuArgArgIlePheLeuGlyLeuGlyMetSerIleSerTyrAlaAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LeuLeuThrLysThrAsnArgIleTyrArgIlePheGluGlnGlyLysArgSerValSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CUGCUCACCAAGACCAACCGCAUCUACCGCAUCCUUCGAGCAGGGCAAGCGCUCGGUCAGU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                               1253
                                                                                                                                                                                                                                                                                                 1373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1913
                                    62
                                                                         1193
                                                                                                              82
                                                                                                                                                                                    102
                                                                                                                                                                                                                         1313
                                                                                                                                                                                                                                                              122
                                                                                                                                                                                                                                                                                                                                                                           1433
                                                                                                                                                                                                                                                                                                                                                                                                                                                   1493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2213
                                                                                                                                                                                                                                                                                                                                          142
                                                                                                                                                                                                                                                                                                                                                                                                                162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          402
                                                                                                                                                                                                                  엄
                                                                                                                                                                                                                                               8 8
                                                                                                                                                                                                                                                                                                                           දු දු
                                                                                                                                                                                                                                                                                                                                                                                                                                         요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             යි සි
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                 δ
                                                                셤
                                                                                                          B 6
                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

341

2237

381

361

```
2838 TGCGAGAACCTTGAGGCCCCAGGGCTGGCCCAAACAGACTTACGTCACTTACGCCAAC 2897
                                                                                                                                                              ABpLeuSerLeuIleCysLeuLeuGlyTyrSerMetLeuLeuMetValThrCysThrVal
                                                                                                                                                                                                                                                                                     1938 CTGCCCCTCTTCCTGGCCGTGGTGGGCATCGCTGCTCGTGCTTGTTCGTGGTGATCACCTTT
                                               GTGCGCTACAACGACACGCCCATCGTCAAGGCCTCGGGCCGTGAACTGAGCTACGTGCTG
                                                                                                                                                                                                                                                                                                                           ACCATGTACACCACTTGCATGGTCTGGCTGGCCTTCATCCCCCATCTTTTTGGCACCTCG
                                                                                                                                                                                                                                                                                                                                                                                                            ValargTyrasnaspThrProileValLysAlaSerGlyArgGluLeuSerTyrValLeu
                                                                     LeuAlaGlyIlePheLeuCysTyrAlaThrThrPheLeuMetIleAlaGluProAspLeu
                                                                             ThrMetTyrThrTysIleValTrpLeuAlaPheIleProllePheGlyThrSer
                                                                                                                                                                                                                                                                                                                                                                               AlaSerValSerLeuGlyMetLeuTyrMetProLysValTyrIleIleLeuPheHisPro
                                                                                                                                                                                                                                                                                                                                                                                        GCCTCGGTGTCCCTGGGGAATGCTCTACATGCCCAAAGTCTACATCATCCTCTTCCACCG
                                                                                                                                                                                                                                                                                                                                                                                                                                           SerablysphethrGlnLysGlyanPheArgProAsnGlyGluAlaLysSerGluLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CysGluAsnLeuGluThrProAlaLeuAlaThrLysGlnThrTyrValThrTyrThrAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                         rccaacaagricacgcagaaggcaacriccgcccaacggagaggccaagrcrgagcrc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 14, Application US/09820809
Patent No. 6608176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HisAlaIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATGCAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 8
US-09-820-809-14
                                      282
                                                      1998
                                                                                     2058
                                                                                                                 2118
                                                                                                                                               2178
                                                                                                                                                                             2238
                                                                                                                                                                                                           2298
                                                                                                                                                                                                                                         2358
                                                                                                                                                                                                                                                                       2418
                                                                                                                                                                                                                                                                                                     2478
                                                                                                                                                                                                                                                                                                                   462
                                                                                                                                                                                                                                                                                                                                  2538
                                                                                                                                                                                                                                                                                                                                                  482
                                                                                                                                                                                                                                                                                                                                                                 2598
                                                                                                                                                                                                                                                                                                                                                                               202
                                                                                                                                                                                                                                                                                                                                                                                                                           2718
                                                                                                                                                                                                                                                                                                                                                                                                                                           542
                                                                                                                                                                                                                                                                                                                                                                                                                                                          2778
                                                                     302
                                                                                                   322
                                                                                                                                 342
                                                                                                                                                               362
                                                                                                                                                                                             382
                                                                                                                                                                                                                          402
                                                                                                                                                                                                                                                                                      442
                                                                                                                                                                                                                                                                                                                                                                                              2658
           262
                                                                                                                                                                                                                                                        422
                                                                                                                                                                                                                                                                                                                                                                                                              522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       582
           8 6 8 6
                                                                    ઠે
                                                                               8 è
                                                                                                              요
                                                                                                                                ò
                                                                                                                                           셤
                                                                                                                                                         ઠે
                                                                                                                                                                         g
                                                                                                                                                                                      දි දි
                                                                                                                                                                                                                     8 6 6 6
                                                                                                                                                                                                                                                                                品 谷 品 谷
                                                                                                                                                                                                                                                                                                                                              6 B 6
                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                       ያ ያ
                                                                                                                                                                                                                                                                                                                                                                                                                                                       영 상
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     요
                                                                                                                                                                             1397
                                                                                                                                                                                                                                                                                                            1457
                                                                                                                                                                                                                                                                                                                                          1517
                                                                                                                                                                                                                                                                                                                                                                       1577
                                                                                                                                                                                                                                                                                                                                                                                                                    IleaspalavalTyralaMetGlyHisAlaLeuHisAlaMetHisArgAspLeuCysPro 101
                                                                                                                                                                                                                                                                                                                                                         141
                                                                                                                                                                                                                                                                                                                                                                                      AspalaProGlyArgTyrAspIleTyrGlnTyrGlnLeuArgAsnGlySerAlaGluTyr 161
                                                                                                                                                                                                                                                                81
                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                        1398 ATCGATGCCGTGTACGCCATGGGCCACGCGTGCACGCCATGCACCGTGACCTGTGTCCC
                                                                                                                                                                                                                                                                                                                                                        IleArgAsnValAsnPheSerGlylleAlaGlyAsnProValThrPheAsnGluAsnGly
                                                                                                                                                                                                                                 PheHisCysLysLeuSerArgHisAlaLeuLysLysGlySerHisIleLysLysCysThr
                                                                                                                                                                                                                                                             AsnArgGluArg11eG1yGlnAspSerAlaTyrGluG1nGluG1yLysValG1nPheVal
                                                                                                                                                                                                                                                                                                                                                                 GlySerGlyGlnGlnLeuProArgSerIleCysSerLeuProCysGlnProGlyGluArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TyrGlnValAspArgTyrThrCysLysThrCysProTyrAspMetArgProThrGluAsn
                                                                                                                                                                    GlyValSerSerSerLeuProThrArgMetThr---SerGlyPheAspArgTyrPheSer
                                                                                                  Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                      x US-09-016-434-1074 (1-3884)
                                                                                                                                        Gaps:
TELEFAX: (650) 845-4166

INFORMATION FOR SEQ ID NO: 107
SEQUENCE CHARACTERISTICS:
LENGTH: 3884 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TYPE: TOPOLOGY: linear
IMMEDIATE SOURCE:
LIBRARY: GENBANK
CLONE: 91160182
                                                                                                  0
3004.50
97.77$
96.74$
96.70$
                                                                                                                Percent Similarity:
Best Local Similarity:
                                                                                                                                                      US-10-828-332-7 (1-584)
                                                                                           Alignment Scores
                                                                                                                                                                                                                                                                                                                          102
                                                                                                                                                                                                                                                                              1338
                                                                                                                                                                                                                                                                                                                                                         122
                                                                                                                                                                                                                                                                                                                                                                                       142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1698
                                                                                                                                                                                                                                 42
                                                                                                                                                                                                                                                                                             82
                                                                                                                                                                                                                                                                                                                                          1458
                                                                                                                                                                                                                                                                62
                                                                                                                                                                                                                                                                                                                                                                                                                                                   182
                                                                                                                                Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                             8 6 8 6
                                                                                                                                                                     ò
                                                                                                                                                                                   g
                                                                                                                                                                                                   ò
                                                                                                                                                                                                               a
                                                                                                                                                                                                                                 è
                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                       중 음
                                                                                                                                                                                                                                                                                                                                      중 음
                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                              ያ ያ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
```

2477

441

2537

461

2597

481

2777

561

581

521

2357

421

```
AspleuSerLeuIleCysLeuLeuGlyTyrSerMetLeuLeuMetValThrCysThrVal
                                                                                                                                                                                                                                                                                                         CysGluAsnLeuGluThrProAlaLeuAlaThrLysGlnThrTyrValThrTyrThrAsn
|||||||||||||||||
TGCGAGAACCTTGAGGCCCCAGCGCTGGCCAAACAGACTTACGTCACTTACACCAAC
 .818 TACCAGGTGGACCGCTACACCTGTAAGACGTGTCCCTATGACATGCGGCCCCACAGAGAAC
              ArgThrSerCyeGlnProlleProlleValLyeLeuGluTrpAspSerProTrpAlaVal
                                                                                                                                                            GluGlnAsnValProLysArgLysArgSerLeuLysAlaValValThrAlaAlaThrMet
                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGCAGAAACGTGCCCAAGCGCAAGCGCAGCCTCAAAGCCGTCGTTACGGCGGCCACCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                         SerbanLysPheThrGlnLysGlyAanPheArgProAanGlyGluAlaLysSerGluLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCAACAAGTTCACGCAGAAGGGCAACTTCCGGCCCAACGAGAGGGCCAAGTCTGAGGTC
                                                                                                                                                                                                                                                  GlnAspGlnArgThrLeuAspProArgPheAlaArgGlyValLeuLysCysAspIleSer
                                                                                                                                                                                                                                                                                                                                                                    GlnSerAlaAspLysLeuTyrIleGlnThrThrThrLeuThrValSerValSerLeuSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATGCAATC 2906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HisAlaile 584
                                                                                                                                                                                                                       382
                                                                                                                                                                                                                                                                                              2418
                                                                                                                                                                                                                                                                                                                         2478
                                                                                                                                                                                                                                                                                                                                                                                                                                                          542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2898
               242
                             1878
                                            262
                                                         1938
                                                                        282
                                                                                      1998
                                                                                                     302
                                                                                                                   2058
                                                                                                                                  322
                                                                                                                                               2118
                                                                                                                                                              342
                                                                                                                                                                           2178
                                                                                                                                                                                          362
                                                                                                                                                                                                        2238
                                                                                                                                                                                                                                     2298
                                                                                                                                                                                                                                                   402
                                                                                                                                                                                                                                                                 2358
                                                                                                                                                                                                                                                                               422
                                                                                                                                                                                                                                                                                                           442
                                                                                                                                                                                                                                                                                                                                                                    482
                                                                                                                                                                                                                                                                                                                                                                                   2598
                                                                                                                                                                                                                                                                                                                                                                                                 502
                                                                                                                                                                                                                                                                                                                                                                                                                2658
                                                                                                                                                                                                                                                                                                                                                                                                                              522
                                                                                                                                                                                                                                                                                                                                                                                                                                            2718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   582
                                                                                                                            8 6 8 6 8 6 8 6 8 6 8 6 8 6
                                                                                                                                                                                                                                                                                                                                                                                             66666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   중 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
 8 8
                         8 & 8
                                                                  ठे
                                                                                  8 8 8
                                                                                                                                                                                                                                                                                                                                              1277
                                                                                                                                                                                                                                                                        1337
                                                                                                                                                                                                                                                                                      1457
                                                                                                                                                                                                                                                                                                                                                                                          1577
                                                                                                                                                                                                                                                                                                                                                                                                                       1637
                                                                                                                                                                                                                                                                                                                                                                                                                                                   1697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1817
                                                                                                                                                                                                                                                                                                                                                                           101
                                                                                                                                                                                                                                                                                                                                                                                                        ASPATAPOGLYARGTYAASTILETYRGINTYRGINLEUARGASNGLYSERALAGLUTYR 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 201
                                                                                                                                                                                                                                                                                                                                                                                                                                     LysVallleGlySerTrpThrAspHisLeuHisLeuArgIleGluArgMetGlnTrpPro 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                  21
                                                                                                                                                                                                                              41
                                                                                                                                                                                                                                                           61
                       TASTE
                                                                                                                                                                                                                                                          IleAspalavaltyralametGlyHisAlaLeuHisAlametHisArgAspLeuCysPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GlySerGlyGlnGlnLeuProArgSerIleCysSerLeuProCysGlnProGlyGluArg
                                                                                                                                                                                                                           SerArgThrieuAspAsnAsnArgArgAsnIleTrpPheAlaGluPheTrpGluAspAsn
                                                                                                                                                                                                                                       AGCCGCACGCTGGACAACAACCAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                             LysLysThrValLysGlyMetAlaCysCysTrpHisCysGluProCysThrGlyTyrGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TyrglnvalaspargTyrThrCysLysThrCysProTyrAspMetargProThrGluAsn
                                                                                                                                                                                                        Aagaagacargaagagaargccrrgcrgcragacacrgcgagccrragaagagaaagagaagag
                                                                                                                                                                                                  GlyValSerSerSerLeuProThrArgMetThr---SerGlyPheAspArgTyrPheSer
                       (MONOSODIUM GLUTAMATE)
                                                                                                                                  3884
564
112
1
                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                    US-10-828-332-7 (1-584) x US-09-820-809-14 (1-3884)
                       UMAMI
GENERAL INFORMATION:
APPLICANT: CHAUDHANI, NIRUPA
APPLICANT: ROPER, STEPHEN D.
TITLE OF INVENTION: TTASTE RECEPTOR FOR UMAM.
FILE REFERENCE: 70373/275576
CURRENT APPLICATION NUMBER: US/09/820,809
CURRENT FILING DATE: 2001-03-30
FRIOR PILING DATE: 2000-03-31
NUMBER OF SEQ ID NOS: 14
SEQ ID NO 14
LENGTH: 3884
                                                                                                                                  0
3004.50
97.77$
96.74$
                                                                                             TYPE: DNA; ORGANISM: Homo sapiens
US-09-820-809-14
                                                                                                                          Alignment Scores:
Pred. No.:
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                            1218
                                                                                                                                                                                                                                                                                                                                 1398
                                                                                                                                                                                                                                                                                                                                                              1458
                                                                                                                                                                                                  m
                                                                                                                                                                                                                1158
                                                                                                                                                                                                                              22
                                                                                                                                                                                                                                                           42
                                                                                                                                                                                                                                                                        1278
                                                                                                                                                                                                                                                                                       62
                                                                                                                                                                                                                                                                                                     1338
                                                                                                                                                                                                                                                                                                                    82
                                                                                                                                                                                                                                                                                                                                                102
                                                                                                                                                                                                                                                                                                                                                                             122
                                                                                                                                                                                                                                                                                                                                                                                           1518
                                                                                                                                                                                                                                                                                                                                                                                                                       1578
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1758
                                                                                                                                                                                                                                                                                                                                                                                                          142
                                                                                                                                                                                                                                                                                                                                                                                                                                      162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           222
                                                                                                                                                                                                               g
                                                                                                                                                                                                                                        8 8 8 8
                                                                                                                                                                                                                                                                                                 8 6 8
                                                                                                                                                                                                                                                                                                                                           8 6 8 6
                                                                                                                                                                                                                                                                                                                                                                                                     ል 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                         È
                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
```

```
1501 GTGGGCATCGCCGCCACGCTGTTCGTGGTCACGTTTGTGCGCTACAACGATACCCCC 1560
                                                                                                                                                                                                                                                                                           CECTCCATCTGCAGTCTGCCCTGCCCGGGGGGGGAAGAAGAAGACTGTGAAGGCCATG 1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1381 TGTAAGACCTGCCCCTACGACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATC 1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1441 CCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGCCGTGCTGCCCCTCTTCCTGGCCGTG 1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1321 gerrigerigerigeakerigegageeerigeakeegaaceagraeeaagragadegeeraeaee 1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCGGCCCTGCTGAGACCAAGACCGC 1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AspHisLeuHisLeuArgIleGluArgMetGlnTrpProGlySerGlyGlnGlnLeuPro 188
                                                                                                                                                                                                                                                                                                                                                                                                 GlyileAlaGlyAsnProValThrPheAsnGluAsnGlyAspAlaProGlyArgTyrAsp 148
                                                                                                                                                                                                                                                                                                                                                                                                                                                           149 ileTyrGlnTyrGlnLeuArgAsnGlySerAlaGluTyrLysVallleGlySerTrpThr 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               328
                                                                                                                                                                                                                                GlyHisAlaLeuHisAlaMetHisArgAspLeuCysProGlyArgValGlyLeuCysPro 108
                                                                                                                                                                                                                                                                                                                                    ArgMetAspProvalAspGlyThrGlnLeuLeuLysTyrIleArgAsnValAsnPheSer 128
                                                           780
                                                                                                                        840
                                                                                                                                                                                  841 CACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11eVallysAlaSerGlyArgGluLeuSerTyrValLeuLeuAlaGlyIlePheLeuCys 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | IleTyrArg11ePheGluGlnGlyLy8ArgSerValSerAlaProArgPheI1eSerPro 368
                                                                                            48
                                                                                                                                                                                                                 88
                                                                                         AAGAGTGCCCCTGTGCGCCTTGAGGAGGTGGCCGAGGGCGCAGTCACCATTCTCCCC
                                                              721 AAGAGGATGTCTGTTCGAĞĞTTCGACCGATÀCTTCTCCAĞCCĞCACĞCTĞGACAACAAC
                                                                                                                                                    HisAlaLeuLysLysGlySerHisIleLysLysCysThrAsnArgGluArgIleGlyGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AspSerAlaTyrGluGluGluGlyLysValGlnPheValIleAspAlaValTyrAlaMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AlacysCysTrpHisCysGluProCysThrGlyTyrGlnTyrGlnValAspArgTyrThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ValGlyIleAlaAlaThrLeuPheValValValThrPheValArgTyrAsnAspThrPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                189 ArgSerIleCysSerLeuProCysGlnProGlyGluArgLysLysThrValLysGlyMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CyslysThrCysProTyrAspMetArgProThrGluAsnArgThrSerCysGlnProlle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ProllevalLysLeuGluTrpAspSerProTrpAlaValLeuProLeuPheLeuAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TyralaThrThrPheLeuMetIlealaGluProAspLeuGlyThrCysSerLeuArgArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IlePheLeuGlyLeuGlyMetSerIleSerTyrAlaAlaLeuLeuThrLysThrAsnArg
                                15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        349
                                                                                                                                                       49
                                                                                                                                                                                                                 69
                                                                                                                                                                                                                                                                          89
                                                                                                                                                                                                                                                                                                                                     109
                                                                                                                                                                                                                                                                                                                                                                                                 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             329
    8 8
                                                     셤
                                                                                   õ
                                                                                                                   셤
                                                                                                                                                      ઠે
                                                                                                                                                                            셤
                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                 윱
                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ፊ ይ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            중 요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8 B 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        501 GCTCGCAGGGCCAACCAGACCGGCCACTTCTTTTGGATGGGTTCTGATAGCTGGGGCTCC 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 9
PCT-US91-09422-20
Sequence 20, Application PC/TUS9109422
GENERAL INFORMATION:
APPLICANT: Mulvihill, Eileen R.
APPLICANT: Hagen, Frederick S.
APPLICANT: Hagen, Knaled M.
APPLICANT: Almers, Wolfhard
TILE OF INVENTION: G PROTEIN-COUPLED GLUTAMATE RECEPTORS
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MetProGlyValSerSerLeuProThrArgMetThrSer----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2426
519
0
1
53
                                                                                                                                                                                                                                 COUNTAL: .....
CIP: 94105-1492
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US91/09422
FILING DATE: 19911212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14
                                                                                                                                                                      STREET: One Market Plaza, Steuart Street Tower CITY: San Francisco STATE: California COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-828-332-7 (1-584) x PCT-US91-09422-20 (1-2426)
                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION: 435

PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/672,007
FILING DATE: 18-MAR.1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/648,481
FILING DATE: 30-JAN-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/626,806
FILING DATE: 12-DEC-1990
ATTORNEY/AGENT INFORMATION:
AMAR: PARTMELE, SLEVEN: 31952-6PC
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 467-9600
TELEPHONE: (206) 467-960
TELEPAX: (415) 543-5043
INFORMATION FOR ESQ ID NO: 20:
SEQUENCE CHARACTERISTICS:
LENGTH: 2426 base pairs
TOPOLLGY: linear
MOLECULGY: linear
MOLECULGY: LINEAR
INMEDIATE SOURCE:
CLORE: SRI3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps:
                                                                                                                                                                    and Townsend
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2720.50
90.73%
90.73%
87.56%
                                                                                                                                                                    ADDRESSEE: Townsend
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PCT-US91-09422-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ч
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14
```

ద

ò

셤

δ

ठ

```
, NAME/KEY:
; LOCATION:
US-08-855-146-1
                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              262
                                                                                                                                                                        Query Match:
DB:
                                                                                                                          Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                       ጵ
                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                             원
                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                 2040
                                                                                                                                                                                                                        CCCCGCTTTGCCAGGGGGTGCTCAAGTGCGACATCTCGGACCTGTCCCTCATCTGCCTG 1980
                                                                                                                                                                                                                                                                                                                                        1741 ATTTACCGCATCTTTGAGCAGGCCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCG
                                                                                                                                                                          448
                                                                                                                                                                                                                                                                                                                            508
                        AlaSerGlnLeuAlaIleThrPheIleLeuIleSerLeuGlnLeuLeuGlyIleCysVal
                                      GCCTCGCAGCTGGCCATCACCTTCATCTCCCTGCAGCTGCTCGGCATCTGCGTG
                                                                        TrpPheValValAspProSerHisSerValValAspPheGlnAspGlnArgThrLeuAsp
                                                                                                                        ProArgPheAlaArgGlyValLeuLysCysAsplleSerAspLeuSerLeulleCysLeu
                                                                                                                                                                      LeuGlyTyrSerMetLeuLeuMetValThrCysThrValTyrAlaileLysThrArgGly
                                                                                                                                                                                                    CTGGGCTACAGCATGCTGCTGATGGTCACGTGTACTGTGTGTACGCCATCAAGACCCGAGGC
                                                                                                                                                                                                                                                                                                                            IleGlnThrThrThrLeuThrValSerValSerLeuSerAlaSerValSerLeuGlyMet
                                                                                                                                                                                                                                                                                                                                                                                                                                   NS-08-055-146-1
; Sequence 1, Application US/08855146
; Patent No. 6221609;
; CENERAL INFORMATION:
; APPLICANT: Belagaje, Rama M.
; APPLICANT: Wu, Su
; TITLE OF INVENTION: EXCITATORY AMINO ACID RECEPTOR PROTEIN
; TITLE OF INVENTION: AND RELATED NUCLEIC ACID COMPOUNDS
; NUMBER OF SEQUENCES: 17
; CORRESPONDENCE ADDRESS: 17
; ADDRESSER: Bli Lilly and Company
; STREET: Lilly Corporate Center/Patent Department
; STRATE: IN
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/855,146 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                            LeuTyrMetProLysValTyrIleIleLeuPheHis 520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION: 435

PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/021,243
FILING DATE: 07-UUL-1996
ATTORNEY/AGENT INFORMATION:
NAME: Webster, Thomas D.
REGISTRATION NUMBER: 39,872
REFERENCE/DOCKET NUMBER: X-10836
TELECHONE: (317) 276-2334
TELEPHONE: (317) 276-2764
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 3321 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 46285
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                        369
                                                                          389
                                                                                                 1861
                                                                                                                          409
                                                                                                                                                 1921
                                                                                                                                                                                                 1981
                                                                                                                                                                                                                                                  2041
                                                                                                                                                                                                                                                                                                  2101
                                                                                                                                                                                                                                                                                                                            489
                                                                                                                                                                                                                                                                                                                                                    2161
                                                                                                                                                                                                                                                                                                                                                                                                     2221
                                                 1801
                                                                                                                                                                          429
                                                                                                                                                                                                                            449
                                                                                                                                                                                                                                                                           469
                                                                                                                                                                                                                                                                                                                                                                            509
                                                                                          g
                                                                                                                        δ
                                                                                                                                              g
                                                                                                                                                                          ઠે
                                                                                                                                                                                             g
                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                    셤
                      8
                                              셤
                                                                       ઠે
```

```
1633 AAGAAAACGGTGAAAGGGGTCCCTTGCTGCTGGACTGTGAACGCTGTGAAGGTTACAAC 1692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1156 TTTGGCTGCAAGTTAGGATCACATGGG---AAAAGGAACAGTCATATAAAGAAATGCACA 1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                142 AspalaProGlyArgTyrAspIleTyrGlnTyrGlnLeuArgAsnGlySerAlaGluTyr 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  162 LysVallleGlySerTrpThrAspHisLeuHisLeuArgIleGluArgMetGlnTrpPro 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GlyArgValGlyLeuCysProArgMetAspProValAspGlyThrGlnLeuLeuLysTyr 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               122 IleargasnValasnPheSerGlyIleAlaGlyAsnProValThrPheAsnGluAsnGly 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         202 LysLysThrValLysGlyMetAlaCysCrsTrpHisCysGluProCysThrGlyTyrGln 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           222 TyrGlnValAspArgTyrThrCysLysThrCysProTyrAspMetArgProThrGluAsn 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LeuProLeuPheLeuAlaValValGlyIleAlaAlaThrLeuPheValValThrPhe 281
:::|||:::|||:::||||:|||||||
                                                                                                                                                                                                                                                                                                                                                                                                                 22 SerArgThrLeuAspAsnAsnArgArgAsnIleTrpPheAlaGluPheTrpGluAspAsn 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81
                                                                                                                                                                                                                                                                                                                                                 3 GlyValSerSerSerLeuProThrArgMetThr---SerGlyPheAspArgTyrPheSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IleAspAlaValTyrAlaMetGlyHisAlaLeuHisAlaMetHisArgAspLeuCysPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     62 AsnArgGluArgIleGlyGlnAspSerAlaTyrGluGluGluGlyLysValGlnPheVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             242 ArgThrSerCysGlnProlleProlleValLysLeuGluTrpAspSerProTrpAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     42 PheHisCysLysLeuSerArgHisAlaLeuLysLysGlySerHisIleLysLysCysThr
                                                                                                                                                                                       3321
437
58
86
2
                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                               US-10-828-332-7 (1-584) x US-08-855-146-1 (1-3321)
                                                                                                                                                                                         7.77e-266
2370.00
84.91%
74.96%
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: CDNA
PEATURE:
                                                                                                                       58..2781
                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
```

```
1036 dedecueucacaaututuidececaaaceaecaucaatusaatedaudeaudeaudeauacutuaga 1095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IleArgAsnValAsnPheSerGlyIleAlaGlyAsnProValThrPheAsnGluAsnGly 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    82 IleAspAlaValTyrAlaMetGlyHisAlaLeuHisAlaMetHisArgAspLeuCysPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GlyValSerSerSerLeuProThrArgMetThr---SerGlyPheAspArgTyrPheSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SerArgThrLeuAspAsnArgArgAsnIleTrpPheAlaGluPheTrpGluAspAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PheHisCysLysLeuSerArgHisAlaLeuLysLysGlySerHisIleLysLysCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           62 AsnArgGluArgIleGlyGlnAspSerAlaTyrGluGlnGluGlyLysValGlnPheVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GlyargvalGlyLeuCysProArgMetAspProValAspGlyThrGlnLeuLeuLysTyr
EXCITATORY AMINO ACID RECEPTOR PROTEIN AND RELATED NUCLEIC ACID COMPOUNDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3321
437
58
86
2
                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: Eli Lilly and Company
STREET: Lilly Corporate Center/Patent Department
CITY: Indianapolis
STATE: IN
COUNTRY: USA
                                                                                                                                               COMPUTER READBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/855,146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-828-332-7 (1-584) x US-08-855-146-3 (1-3321)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels:
                                                                                                                                                                                                                                                                  CLASSIFICATION: 435
PH.OR APPLICATION DATA:
APPLICATION UNDRER: US 60/021,243
FILING DATE: 07-UL-1996
ATTORNEY/AGENT INFORMATION:
NAME: Webster, Thomas D.
REGISTRATION NUMBER: 39,872
REFERENCE/DOCKET NUMBER: X-10836
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                        (317) 276-63334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7.77e-266
2370.00
84.91%
74.96%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 3321 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (317)276-2764
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: single
 TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                                                                          FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-855-146-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                             2052
                                                                                                                                                                                                                                           2112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2532
                                                                                                         1933 CTAACGGGGATTTTTCTCTGTTATTCAATCACGTTTTTTAATGATTGCAGCACCAGATACA 1992
                                                                                                                                                                                                                                                                                      2113 GCGCCCAAGTTCATTAGTCCAGCATCTCAGCTGGTGATCACCTTCAGCCTCATCTCCGTC, 2172
                                                                                                                                                                                                                                                                                                                                                2533 GGAGAGCAGCGGACACTAGATCCAGAGAAGGCCAGGGGAGTGCTCAAGTGTGACATTTCT 2292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2293 GATCTCTCACTCATTTGTTCACTTGGATACAGTATCCTCTTGATGGTCACTTGTACTGTT 2352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2413 ACCATGTATACCACCTGCATCATTTGGTTAGCTTTCATCCCCATCTTTTTTGGTACAGCC 2472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1813 GTGCCTGTGTTTGTTGCAATATTGGGAATCATCGCCACCTTTGTGTGATCGTGACCTTT 1872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2653 CAAAGCAAACTGATCCAAAAAGGAAATGACAGACCAAATGGCGAGGTGAAAGTGAAACTC 2712
                                                                                                                                                                                                          LeuleuThrLysThrAsnArgileTyrArgilePheGluGlnGlyLysArgSerValSer 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               521
                                                                                                                                                322 GlyThrCysSerLeuArgArg1lePheLeuGlyLeuGlyMetSerIleSerTyrAlaAla 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                       441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     561
                                                                                       LeualaGlyIlePheLeuCysTyralaThrThrPheLeuMetIleAlaGluProAspLeu 321
                                                                                                                                                                                                                                                                                                                                  401
                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                       AlaProArgPheIleSerProAlaSerGlnLeuAlaIleThrPheIleLeuIleSerLeu 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ThrMetTyrThrTysIleValTrpLeuAlaPheIleProIlePhePheGlyThrSer 481
                                                                                                                                                                   GlnLeuLeuGly11eCy6ValTrpPheValValAspProSerHisSerValValAspPhe
                                                                                                                                                                                                                                         2053 CTTCTGACCAAAACAAACGTATCCACCGAATATTTGAGCAGGGGAAGAATCTGTCACA
                                                                                                                                                                                                                                                                                                                                                                                        GlnAspGlnArgThrLeuAspProArgPheAlaArgGlyValLeuiysCysAspIleSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     482 GlnSerAlaAspLysLeuTyrIleGlnThrThrThrLeuThrValSerValSerLeuSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AlaSerValSerLeuGlyMetLeuTyrMetProLysValTyrIleIleLeuPheHisPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GluGlnAsnValProLysArgLysArgSerLeuLysAlaValThrAlaAlaThrMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SerAsnLysPheThrGlnLysGlyAsnPheArgProAsnGlyGluAlaLysSerGluLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                       AspleuSerLeulleCysLeuLeuGlyTyrSerMetLeuLeuMetValThrCysThrVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2473 CAGTCAGCAGAAAAGATGTACATCCAGACAACAACAACATTACTGTCTCCATGAGTTTAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-855-146-3
; Sequence 3, Application US/08855146
; Patent No. 6221609
; GENERAL INFORMATION:
APPLICANT: Belagaje, Rama M.
; APPLICANT: Wu, Su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |||:::|||
2773 CATICAAIC 2781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HisAlaile 584
                                                                                        302
                                                                                                                                                                                                             342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2593
                                                                                                                                                                                                                                                                       362
                                                                                                                                                                                                                                                                                                                                  382
                                                                                                                                                                                                                                                                                                                                                                                            402
                                                                                                                                                                                                                                                                                                                                                                                                                                                       422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     542
 음
                               ઠ
                                                        ద
                                                                               ઠે
                                                                                                              g
                                                                                                                                                ઠે
                                                                                                                                                                      a
                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                     ሯ
                                                                                                                                                                                                                                                                                             임
                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
```

61

```
2870
                                                                                                                                                                                                                                                                                                                                                                                                                                                     441
                                                                                                                                                                                                       461
                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                           501
                                                                                                401
                                                                                                                                                                                                                                                                                                                                                                                  561
                                                            2691 GGAGAGCGGACACTAGATCCAGAGAGGCCAGGGGAGTGCTCAAGTGTGACATTTCT
                                                                                                                                                                                                                TATGCCATTAAAACGAGAGGTGTCCCAGAGACTTTCAATGAAGCCAAACCTATTGGATTT
                                                                                                                                                                                                                                                                                                                                                                                                                               ||||||||:::|||||||||||
TGTGAGAGTCTTGAAACCAACAGTAAGTCATCTGTAGAGTTTCCGATGGTCAAGAGCGGG
                                   3111 CAAAGCAAACTGATCCAAAAAGGAAATGACAGACCAAATGGCGAGGTGAAAAGTGAACTC
          Arcaraigciccirccaaccacrificiaacaciioscaigrarraacciaicaacci
                                                                                                                                                                             ThrMetTyrThrThrCyslleValTrpLeuAlaPhelleProllePhePheGlyThrSer
                                                                                                                                                                                                                                                  AlaSerValSerLeuGlyMetLeuTyrMetProLysValTyrIleIleLeuPheHisPro
                                                                                                                                                                                                                                                                                                                      LeuLeuThrLysThrAsnArgIleTyrArgIlePheGluGlnGlyLysArgSerValSer
                                                                                                                                                                                                                                                                                                                                                                                 SerAsnLysPheThrGlnLysGlyAsnPheArgProAsnGlyGluAlaLysSerGluLeu
                                                                                                                                 GlnAepGlnArgThrLeuAspProArgPheAlaArgGlyValLeuLysCysAspIleSer
                                                                                                                                                                    AspLeuSerLeuIleCysLeuLeuGlyTyrSerMetLeuLeuMetValThrCysThrVal
                                                                                                                                                                                                       TyrAlaIleLysThrArgGlyValProGluThrPheAsnGluAlaLysProIleGlyPhe
                                                                                                                                                                                                                                                                                                                                                                                                                   CysGluAsnLeuGluThrProAla---------------
 RESULT 13
US-08-604-298-2
; Sequence 2, Application US/08604298
; Patent No. 6084084
; GENERAL INFORMATION:
APPLICANT: Stormann, Thomas M.
APPLICANT: Simin, Rachel T.
; APPLICANT: Hammerland, Lance G.
APPLICANT: Hammerland, Lance G.
APPLICANT: Fuller, Forrest H.
; TITLE OF INVENTION: GLUTAMATE RECEPTOR
; UNDER OF SEQUENCES: 16
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Lyon & Lyon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3291 AATC 3294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           alle
                                           2511
                                                                              2571
                                                                                                                 2631
                                                                                                                                                                                     2751
                                                                                                                                                                                                                        2811
                                                                                                                                                                                                                                                                                            2931
                                                                                                                                                                                                                                                                                                                               2991
                                                                                                                                                                                                                                                                                                                                                522
                                                                                                                                                                                                                                                                                                                                                                 3051
                                                                                                                                                                                                                                                                                                                                                                                                                                     3171
          2451
                                                              362
                                                                                                                                                                                                                                                          2871
                                                                                                                                                                                                                                                                                                                                                                                  542
                           342
                                                                                                382
                                                                                                                                  402
                                                                                                                                                                                                       442
                                                                                                                                                                                                                                         462
                                                                                                                                                                                                                                                                            482
                                                                                                                                                                                                                                                                                                              502
                                                                                                                                                                                                                                                                                                                                                                                                                     295
                                                                                                                                                                     422
          ብ ራ
                                       셤
                                                      ያ ያ
                                                                                         පි පි
                                                                                                                            8 6 8 6
                                                                                                                                                                                                  6 B 6
                                                                                                                                                                                                                                                   요 등
                                                                                                                                                                                                                                                                                      중 음
                                                                                                                                                                                                                                                                                                                         원 &
                                                                                                                                                                                                                                                                                                                                                            요
                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                               8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                         1613
                                                                                                                                                                                                                                1790
                                                                                                                                                                                                                                                                   1850
                                                                                                                                                                                                                                                                                                    1910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2450
                                                                                                                                                    1494 GGGGCTGTGACAATTTTGCCCAAACGAGCATCAATTGATGGATTTGATCGATACTTTAGA 1553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    281
                                                                                                                                                                                                                                                 GlyArgValGlyLeuCysProArgMetAspProValAspGlyThrGlnLeuLeuLysTyr 121
                                                                                                                                                                                                                                                                                    141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LeualaGlyIlePheLeuCysTyxAlaThrThrPheLeuMetIleAlaGluProAspLeu 321
                                                                                                                                                                                                               IleAspalaValTyralaMetGlyHisAlaLeuHisAlaMetHisArgAspLeuCysPro 101
                                                                                                                                                                                                                                                                                                                                                                                                                            LyslysThrValLysGlyMetAlaCysCysTrpHisCysGluProCysThrGlyTyrGln 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GlyThrCysSerLeuArgArgIlePheLeuGlyLeuGlyMetSerIleSerTyrAlaAla 341
                                                                                                                                                                             81
                                                                                                         41
                                                                                                                                            61
                                                                      7
                                                                                                                  1554 AGCCGAACTCTTGCCAATAATCGAAGAAATGTGTGGTTTGCAGAATTCTGGGAGGAGGAAT
                                                                     GlyValSerSerSerLeuProThrArgMetThr---SerGlyPheAspArgTyrPheSer
                                                                                                                                                                                       ValArgTyrAsnAspThrProlleValLysAlaSerGlyArgGluLeuSerTyrValLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AsnArgGluArgIleGlyGlnAspSerAlaTyrGluGlnGluGlyLysValGlnPheval
                                                                                                                                                                                                                         1731 ATTGATGCTGTATATTCCATGCCTACGCCCTGCACAAAATGCACAAAAGATCTCTGCCCT
                                                                                                                                                                                                                                                          TyrGlnValAspArgTyrThrCysLysThrCysProTyrAspMetArgProThrGluAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ArgThrSerCysGlnProlleProlleValLysLeuGluTrpAspSerProTrpAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SerArgThrLeuAspAsnAsnArgArgAsnIleTrpPheAlaGluPheTrpGluAspAsn
                                                                                                                                           PheHisCysLysLeuSerArgHisAlaLeuLysLysGlySerHisIleLysLysCysThr
                                                                                                                                                                                                                                                                                   IleArgAsnValAsnPheSerGlyIleAlaGlyAsnProValThrPheAsnGluAsnGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LeuProLeuPheLeuAlaValValGlyIleAlaAlaThrLeuPheValValValThrPhe
 438
59
84
3
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                     x US-08-823-110-2 (1-3833)
2348.00
82.56%
72.76%
75.57%
                                                     (1-584)
          Similarity:
al Similarity:
                                                     US-10-828-332-7
                                                                                                       22
                                                                                                                                                                                              1671
                                                                                                                                                                                                                                                                                                                                                                                                                                              2091
                                                                                                                                           42
                                                                                                                                                                                                                                                                   1791
                                                                                                                                                                                                                                                                                                    1851
                                                                                                                                                                                                                                                                                                                                       1911
                                                                                                                                                                                                                                                                                                                                                                                                             2031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2151
                                                                                                                                                                             62
                                                                                                                                                                                                               82
                                                                                                                                                                                                                                                 102
                                                                                                                                                                                                                                                                                    122
                                                                                                                                                                                                                                                                                                                       142
                                                                                                                                                                                                                                                                                                                                                                                           182
                                                                                                                                                                                                                                                                                                                                                                                                                             202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            322
                  Best Local S:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                               8 6 8 6
                                                                                                                                                                                                                                                                                                                                                                                     8 6 8 6
                                                                     ઠે
                                                                                      유
                                                                                                       ઠે
                                                                                                                      g
                                                                                                                                         8 8 8
                                                                                                                                                                                        ያ
ያ
                                                                                                                                                                                                                          6 음
                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                             ⋧
                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                           6 B 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8 6 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  යි සි
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
```

Wed

```
2270
                                                                                                                                                                                                                                                       2330
                                                                                                                                                                                                                                                                                             2390
                                                                                                                                                                                                                                                                                                                                                                        2510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2990
                                                            2030
                                                                                                                                                                     2750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     281
                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  501
                                                                                201
                                                                                                                    LysLysThrValLysGlyMetAlaCysCysTrpHisCysGluProCysThrGlyTyrGln 221
                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                LeuAlaGly1lePheLeuCysTyrAlaThrThrPheLeuMetIleAlaGluProAspLeu 321
                                                                                                                                                                                                                                                                                                                                                                                                                               362 AlaproArgPhelleSerProAlaSerGlnLeuAlaIleThrPhelleLeuIleSerLeu 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       521
                                                                                                                                                                                                ThrMetTyrThrThrCysIleValTrpLeuAlaPheIleProIlePheGlyThrSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            142 AspAlaProGlyArgTyrAspIleTyrGlnTyrGlnLeuArgAsnGlySerAlaGluTyr
                                           162 LysvallleGlySerTrpThrAspHisLeuHisLeuArglleGluArgMetGlnTrpPro
                                                                                                                                                          222 TyrGlnValAspArgTyrThrCysLysThrCysProTyrAspMetArgProThrGluAsn
                                                                                                                                                                                                                                                                                                                                                     322 GlyThrCysSerLeuArgArgllePheLeuGlyLeuGlyMetSerIleSerTyrAlaAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GlnAapGlnArgThrLeuAapProArgPheAlaArgGlyValLeuLysCysAspIleSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AspleuSerLeulleCysLeuLeuGlyTyrSerMetLeuLeuMetValThrCysThrVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TyralaileLysThrArgGlyValProGluThrPheAsnGluAlaLysProileGlyPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2811 TATGCCATTAAAACGAGGGGGGGTCCCAGAGACTTTCAATGAAGCCAAACCTATTGGATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GlnSerAlaAspLysLeuTyrIleGlnThrThrThrLeuThrValSerValSerLeuSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AlaSerValSerLeuGlyMetLeuTyrMetProLysValTyr1leIleLeuPheHisPro
                        1911
                                                                                                    2031
                                                                                                                                                                                                                                                                                              2331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2751
                                                                                 182
                                                                                                                       202
                                                                                                                                                                                                                                                                                                                  302
                                                                                                                                                                                                                                                                                                                                    2391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        502
                                                                                               g
                                                                                                                     8
                                                                                                                                   6 B
                                                                                                                                                                          셤
                                                                                                                                                                                         8 6
                                                                                                                                                                                                                               ⋧
                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                     8 8
                                                                                                                                                                                                                                                                                                             8 8
                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                        8 S
                                                                                                                                                                                                                                                                                                                                                                                                                                               음 중 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8 6 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6 6 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                   a
                                        Š
                                                      පු
                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                        | IleAspAlaValTyzAlaMetGIyHisAlaLeuHisAlaMetHisAzgAspLeuCysPro 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GlyArgValGlyLeuCysProArgMetAspProValAspGlyThrGlnLeuLeuLysTyr 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | IleArgAsnValAsnPheSerGlyIleAlaGlyAsnProValThrPheAsnGluAsnGly 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                          GlyValSerSerSerLeuProThrArgMetThr---SerGlyPheAspArgTyrPheSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AsnArgGluArgIleGlyGlnAspSerAlaTyrGluGlnGluGlyLysValGlnPheVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PheHisCysLysLeuSerArgHisAlaLeuLysLysGlySerHisIleLysLysCysThr
                                                                                                                                                                                                                                                                                                                                                       3833
438
594
21
21
3
                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                         x US-08-604-298-2 (1-3833)
STREET: 633 Weat Fifth Street
STREET: Suite 4700
CITY: Loa Angeles
STATE: California
COUNTRY: U.S.A.
ZIP: 90071-2066
COMPUTER: Dailorette, 1.44 Mb
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: Storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFWARE: FastSEQ for Windows 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/604,298
FILING DATE: February 21, 1996
CLASSIFICATION S14
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 21, 1996
CLASSIFICATION NUMBER: 32,32
FILING DATE:
RETERRUCE/DOCKET NUMBER: 212/044
TELECOMMUNICATION INFORMATION:
TELEROMENE: (213) 955-0440
TELERAX: 67-3510
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 3833 base pairs
TYPE: mucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                       Gaps:
                                                                                                                                                                                                                                                                                                                                                       3.74e-263
2348.00
82.56%
72.76%
75.57%
                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-828-332-7 (1-584)
                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                            US-08-604-298-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1731
                                                                                                                                                                                                                                                                                                                                                                                                                                            ო
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1851
```

ò 셤 셤

ઠે

g

ò

q

ò

셤

ર્જ

ò

g

ઠે

```
3051 GAACAGAATGTTCAAAAACGCAAGAGGGGTTCAAGGCTGTGGTGACAGCTGCCACCATG 3110
                                                                                                                                                                                                                                                                                                                               3111 CAAAGCAAACTGATCCAAAAAGGAAATGACAGACCAAATGGCGAGGCGAGGTGAAAAGTGAACTC 3170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             522 GluGlnAsnValProLysArgLysArgSerLeuLysAlaValValThrAlaAlaThrMet 541
                                                                                                                                                                                                                                                                               542 SerAsnLysPheThrGlnLysGlyAsnPheArgProAsnGlyGluAlaLysSerGluLeu 561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           562 CysGluAsnLeuGluThrProAla------------------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Stormann, Thomas M.
APPLICANT: Stormann, Rachel T.
APPLICANT: Simin, Rachel T.
APPLICANT: Hammerland, Lance G.
APLICANT: Hammerland, Lance G.
APLICANT: Fuller, Forrest H.
TITLE OF INVENTION: OLUTAMATE RECEPTOR
NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
ADDRESSE: Lyon & Lyon
STREET: Sulte 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY: U.S.A.
ZIP: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
COMPUTER: IBM Compatible
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: FASTSEQ for Windows 2.0
CURRENT APPLICATION DATE:
APPLICATION NUMBER: US/08/823,110
FILING DATE: March 24, 1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION:
PRIOR APPLICATION DATA;
APPLICATION NUMBER: 08/604,298
FILING DATE: February 21, 1996
ATTORNEY/AGENT INFORMATION:
NAME: Warburg, Richard J.
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 224/259
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEPAX: (213) 955-0440
TELEFAX: (213) 955-0440
TELEFAX: (213) 955-0460
TELEFAX: (214) 955-0460
TELEFAX: (214) 955-0460
TELEFAX: (214) 955-0460
TELEFAX: (215) 955-0460
TELEFAX: (21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 5, Application US/08823110; Patent No. 6077675; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Los Angeles
STATE: California
COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     :|||
3291 AATC 3294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         583 alle 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-823-110-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 14
                                                                                                                             ઠ
                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                 è
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
```

Alignment Scores:

		21	9 4	1098	61	1155		1215	01	1275	21	1335	141 1395 _.	161	1455	181	1515	201	1575	221	1635	41	1695	61	1755	281	1815	301	1875	321	1935
6e-261 Length: 2724 8.00 Matches: 430 . 34\$ Conservative: 53 97\$ Mismatches: 81 93\$ Indels: 2 Gaps: 2	S-08-823-110-5 (1-2724)	ISerSerSerLeuProThrArgMetThrSerGlyPheAspArgTyrPheSer			ysLeuSerArgHisAlaLeuLysLysGlySerHisIleLysLysCysThr 6	AAAAGGAACAGTCATATAAAGAAATGCACA			Ieaspalava Tyra ametGlyHisa aLeuHisa ametHisargAspLeuCysPro		GlyargValGlyLeuCy8ProArgMetAmpProValAmpGlyThrGlnLeuLeuLymTyr		rghenvalaenPheSerGlyIleAlaGlyAenProvalThrPheAenGluAenGly 1 ::	rGinTyrGinLeuArgAgnGlySerAlaGluTyr		TrpThrAspHisLeuHisLeuArgIleGluArgMetGlnTrpPro	CTGGACCAATCAGCTTCATCTAAAAGTGGAAGACATGCAGTGGGCT	GlyserGlyGlnGlnLeuProArgSerIleCysSerLeuProCysGlnProGlyGluArg 2		LysLysThrValLysGlyMetAlaCysCysTrpHisCysGluProCysThrGlyTyrGln 2	cigcicacitataacgcigigaaggitacaac	nValAspArgTyrThrCysLysThrCysProTyrAspMetArgProThrGluAsn 2	TGAACTTTGCCCTCTGGATCAGAGACCCAACATGAAC	rgThrSerCysGlnProlleProlleValLysLeuGluTrpAspSerProTrpAlaVal 2	3TG	LeuProLeuPheLeuAlaValValGlyIleAlaAlaThrLeuPheValValValThrPhe 2		ValArgTyrAsnAspThrProlleValLysAlaSerGlyArgGluLeuSerTyrValLeu 3		LeualaGlyIlePheLeuCysTyxAlaThrThrPheLeuMetIleAlaGluProAspLeu 3	
4.4 232 232 33. 11arity: 75.	7 (1-584) x US	Glyvalsersers	SerArdThrLeuA	AGCCGAACTCTTC	PheHisCysLysI	SC	ArgGluArg1	GGCTGGAGCGAA		ATTGATGCTGTAT	GlyArgValGlyI 	GGATACATTGGCC	IleArgAsnValA ATTCGGGCTGTAA	AspAlaProG1yA	GATGCTCCTGGAC	LygValileGlySe	AAAGTCATCGGCC	GlySerGlyGlnG	CATAGAGAACATA	LysLysThrVall	AAGAAAACGGTGA	TyrGlnValAspA	raccaggregare	ArgThrSerCysG	CGCACAGGCTGCC	LeuProLeuPheL	Grecheretrie	ValArgTyrAsnA	Greecraraare	LeuAlaGlyIleP	Ċ ŤÁACGĠĠĠĂŤŤĬ
i. No.: re: cent Simila t Local Sim ry Match:	10-828-332-	e	22 2	σ	42	1099	62	1156	80	1216	102	1276	132	142	1396	162	1456	. 182	1516	202	1576	(1)	1636	2	1696	262	1756	282	1816	0	1876
Pred. Score Percel Best J Query DB:	US-	රි සි	8 8	g	ò	q	È	g	8	셤	8	g	දු පු	ò	g	ò	q	ò	g	ò	Q	ò	g	ò	셤	ò	g	ò	qq	ò	g

```
1156 gegergelagicelatroscalitraterranda de ascretando de ascreta de 1215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             102 GlyargValGlyLeuCysProArgMetAspProValAspGlyThrGlnLeuLeuLysTyr 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AspalabroGlyArgTyzAspIleTyrGlnTyrGlnLeuArgAsnGlySerAlaGluTyr 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LysvalileGlySerTrpThrAspHisLeuHisLeuArgIleGluArgMetGlnTrpPro 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22 SerArgThrLeuAspAsnArgArgAsnIleTrpPheAlaGluPheTrpGluAspAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             82 IleAspalaValTyralaMetGlyHisAlaLeuHisAlaMetHisArgAspLeuCysPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GlyValSerSerSerLeuProThrArgMetThr --- SerGlyPheAspArgTyrPheSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            42 PheHisCystysLeuSerArgHisAlaLeuLysLysGlySerHisIleLysLysCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   62 AsnArgGluArgIleGlyGlnAspSerAlaTyrGluGlnGluGlyLysValGlnPheVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             122 IleArgAsnValAsnPheSerGlyIleAlaGlyAsnProValThrPheAsnGluAsnGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2724
430
53
81
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-828-332-7 (1-584) x US-08-604-298-5 (1-2724)
      MEDIUM TYPE: S. J. J. J. MEDIUM TYPE: Storage COMPUTER: BEACAGE COMPUTER: BEACAGE COMPUTER: BEACAGE CONTROLL SOFTWARE: FEASURE FOR WINDOWS 2.0 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/604,298 FLING DATE: FEBRUARY 21, 1996 CLASSIFICATION DATA: APPLICATION DATA: APPLICATION DATA: PILING DATE: FILING DATE: FILING DATE: FILING DATE: FILING DATA: APPLICATION NUMBER: 32,327 REFERENCE/DOCKET NUMBER: 32,327 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.46e-261
2328.00
85.34%
75.97%
74.93%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 2724 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear
US-08-604-298-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                      1936 ATCATATGCTCCTTCCGAGGGTCTTCCTAGGACTTGGCATGTGTTTCAGCTATGCAGC 1995
                                                                                                                                                             2056 GCGCCCAAGTTCATTAGTCCAGCATCTCAGCTGATCACCTTCAGCCTCATCTCCGTC 2115
                                                                                                                                                                                                                                                                                                                                                                                                                2116 CAGCTCCTTGGAGTGTTTGTCTGGTTTGTTGTGGATCCCCCCCACATCATCATTGACTAT 2175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2236 GATCTCTCACTTGTTCACTTGGATACAGTATCCTCTTGATGGTCACTTGTACTGTT 2295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2356 ACCATGIATACCACCTGCATCATTTGGTTAGCTTTCATCCCCATCTTTTTTGGTACAGCC 2415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2416 CAGTCAGCAGAAAAGATGTACATCCAGACAACAACAACATTACTGTCTCCCATGAGTTTAAGT 2475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2296 TATGCCATTAAAACGAGAGGTGTCCCAGAGACTTTCAATGAAGCCAAACCTATTGGATTT 2355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2596 CAAAGCAAACTGATCCAAAAAGGAAATGACAGACCAAATGGCGAGGTGAAAAGTGAACTC 2655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              441
                                                                                                                                                                                                                                                                                                                                                                       GlnLeuLeuGlyIleCysValTrpPheValValAspProSerHisSerValValAspPhe 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TyralaileiysThrargGlyValProGluThrPheAsnGluAlaiysProIleGlyPhe 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ThrMetTyrThrTyrCyslleValTrpLeuAlaPhelleProllePhePheGlyThrSer 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GluGlnAsnValProLysArgLysArgSerLeuLysAlaValValThrAlaAlaThrMet 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SerAsniyaPheThrGlniyaGlyAsnPheArgProAsnGlyGluAlaLyaSerGluLeu 561
   322 GlyThrCysSerLeuArgArgllePheLeuGlyLeuGlyMetSerlleSerTyrAlaAla 341
                                                                                                                         LeuLeuThrlysThrasnargIleTyrArgIlePheGluGlnGlyLysArgSerValSer 361
                                                                                                                                                                                                                                                   362 AlaProArgPhelleSerProAlaSerGlnLeuAlaIleThrPhelleLeuIleSerLeu 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 402 GlnAspGlnArgThrLeuAspProArgPheAlaArgGlyValLeuLysCysAspIleSer 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GlnSerAlaAspLysLeuTyrIleGlnThrThrThrLeuThrValSerValSerLeuSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AlaSerValSerLeuGlyMetLeuTyrMetProLysValTyrIleIleLeuPheHisPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AspleuSerleuIleCysLeuLeuGlyTyrSerMetLeuLeuMetValThrCysThrVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
APPLICANT: Simin, Rachell T.
APPLICANT: Simin, Rachell T.
APPLICANT: Simin, Rachell T.
APPLICANT: Humerland, Lance G.
APPLICANT: Humerland, Lance G.
APPLICANT: Fuller, Forrest H.
ITILE OF INVENTION: NOVEL HUMAN METABOTROPIC TITLE OF INVENTION: OLUTAWATE RECEPTOR NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS: 16
CORRESPONDENCE ADDRESS: ADDRESSE: ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 15
US-08-604-298-5
; Sequence 5, Application US/08604298
; Patent No. 6084084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2656 TGTGAGAGTCTTGAAACC 2673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CysGluAsnLeuGluThr 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            542
                                                                                                                                                                                                                                                                                                                                                                             382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      562
                                                                                                                                                                                          1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              422
                                                                                                                                342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               යි
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                   셤
                                                                                                                             ઠે
                                                                                                                                                                      셤
                                                                                                                                                                                                                                   ò
```

81

41

```
a
                                    ઠે
1755
                                                                                                                                                                                                           1815
                                                                                                                                                                                                                                                       1875
                                                                                                                                                                                                                                                                                                                                                                                                                 2295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2475
                                                                                                       2116 CAGCTCCTTGGAGTGTTTGTTGTGGATCCCCCCCACATCATCATTGACTAT 2175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2176 GGAGAGCAGCGGACACTAGATCCAGAGAAGGCCAGGGAGTGCTCAAGTGTGACATTTCT 2235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                        261
                                                                                                                                                                                     281
                                                                                                                                                                                                                               ValArgTyrAsnAspThrProlleValLysAlaSerGlyArgGluLeuSerTyrValLeu 301
                                                                                                                                                                                                                                                                                                                         322 GlyThrCysSerLeuArgArgIlePheLeuGlyLeuGlyMetSerIleSerTyrAlaAla 341
                                              221
                                                                                                                                                                                                                                                                                                                                                                     LeuleuThrLysThrAsnArglleTyrArgllePheGluGlnGlyLysArgSerValSer 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               462 ThrMetTyrThrThrCvg1leValTrpLeuAlaPheIleProIlePheGlyThrSer 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          502 AlaSerValSerLeuGlyMetLeuTyrMetProLysValTyrIleIleLeuPheHisPro 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541
                                              LysLysThryalLysGlyMetAlaCysCysTrpHisCysGluProCysThrGlyTyrGln
                                                                                                                                                    1696 CGCACAGGCTGCCAGCTTATCCCCATCAAATTGGAGTGGCATTCTCCCTGGGCTGTG
                                                                                                                                                                                  LeuProLeuPheLeuAlaValValGlyIleAlaAlaThrLeuPheValValValThrPhe
                                                                                                                                                                                               TyrGlnValAspArgTyrThrCysLysThrCysProTyrAspMetArgProThrGluAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                              382 GlnLeuLeuGlyIleCysValTrpPheValValAspProSerHisSerValValAspPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2236 GATCTCTCACTCATTGTTCACTTGGATACAGTATCCTCTTGATGATCACTTGTTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TyralaileLysThrArgGlyValProGluThrPheAsnGluAlaLysProileGlyPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GlnSerAlaAspLysLeuTyrIleGlnThrThrThrLeuThrValSerValSerLeuSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GluGlnAsnValProLysArgVsArgSerLeuLysAlaValValThrAlaAlaThrMet
                                                                                                                                       ArgThrSerCysGlnProlleProlleValLysLeuGluTrpAspSerProTrpAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          402 GlnaspGlnargThrLeuaspProArgPheAlaArgGlyValLeuLysCyaAspIleSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2296 TATGCCATTAAAACGAGAGGTGTCCCAGAGACTTTCAATGAAGCCAAACCTATTGGATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2356 ACCATGTATACCACCTGCATCATTGGTTAGCTTTCATCCCCATCTTTTTTGGTACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           422 AspleuSerleulleCysLeuLeuGlyTyrSerMetLeuLeuMetValThrCysThrVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2476 GCTTCAGTATCTCTGGGGATGCTCTATATGCCCAAGGTTTATATTATAATTTTCATCA
                                              202
                                                                                          222
                                                                                                                                       242
                                                                                                                                                                                   262
                                                                                                                                                                                                                                282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      442
                                                                                                                                                                                                                                                                                                                                                                      342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3536
                                                                셤
                                                                                                                                                          셤
                                             ઠે
                                                                                         ઠે
                                                                                                         쉽
                                                                                                                                     ò
                                                                                                                                                                                  ઠે
                                                                                                                                                                                                    ద
                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
```

Search completed: June 21, 2005, 18:02:11 Job time : 333 secs This Page Blank (uspto)

OM protein

Run on:

Sequence:

Searched:

```
AR149574 Sequence
A43637 Sequence 1
AX427263 Sequence
AK122982 Homo sapi
AR208972 Sequence
AR208972 Sequence
AK12836 Homo sapi
A46195 Sequence
AX68167 Sequence
AX68167 Sequence
AX68167 Sequence
AX58167 Sequence
AX58167 Sequence
AX58167 Sequence
AX58167 Sequence
AX58167 Sequence
AX168167 Sequence
AX168167 Sequence
AX16816 ASQUENCE
AX16816 ASQUENCE
AX16816 Homo sapi
CQ853450 Sequence
AX131536 Homo sapi
CQ853450 Sequence
AX131536 Homo sapi
CQ853450 Sequence
AX131536 Homo sapi
                                                                                                                                                                                                                                                                                                                                                                                                  U95025 Homo sapien
U63288 Rattus norv
AR147650 Sequence
AR147651 Sequence
AX548898 Sequence
AX58362 Sequence
U92459 Human metab
AA1286921 Homo sapi
AR098833 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A736922 Mus musculu
A736922 Homo sapi
AR08835 Sequence
AY68335 Homo sapi
AR149579 Sequence
A43647 Sequence
A43647 Sequence
A43647 Sequence
AR270555 Sequence
X94552 H.sapiens m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAT 18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Universal to 2018)

1 (bases 1 to 2018)
Chaudhari, N. and Roper, S. D.
Taste receptor for umami (monosodium glutamate) taste
Patent: US 6608176-A 1 19-AUG-2003;
Location/Qualifiers
2018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2838
275
2
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AR381454 2838 bp
Sequence 1 from patent US 6608176.
AR381454
AR381454.1 GI:40089512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                   HSU95025

RAU67328

RAR147651

AR147651

AR147651

AR24898

AR588983

AR5286921

ARA286921

ARA18281

AR418281

AR468835

AR668335

AR668335

AR668335

AR668335

AR668335

AR668335

AR668335

AR668335
                                                                                                                                                                                                                                                                                                                              RNU47331
CQ730036
                                                                         AR208972
AR208973
HSU92457
AK122836
                                                                                                                                                A46196
AR270511
AR381464
ARX581464
AX658167
HSMGLUR4
CQ849704
CQ849704
CQ853450
AK131536
                                                                                                                                                                                                                                                                                                                                                                                   AY673682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3.16e-246
3050.50
98.97$
98.63$
98.18$
                                                                                                                                                                                                                                                                                                                                                                                 2727
                                                                                                                                                                                                                                                                                                                                                                                                                        2793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                  882.0
76.5
76.3
776.3
776.3
775.6
775.6
775.6
74.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
Pred. No.:
                      330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
330044.5
33004.5
33004.5
33004.5
33004.5
33004.5
33004.5
33004.5
33004.5
33004.5
33004.5
33004.5
33004.5
33004.5
33004.5
33004.5
33004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3004.5
3
                                                                                                                                                                                                                                                                                                                                                                                                                    23370
23370
23370
23370
23313
23313
23313
2328
2328
2219
2219
2219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
TITLE .
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 1
AR381454
                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Command line parameters:
-MODEL=frame+ p2n.model.-DEV=xlh
-Q=/Cgn2_1/USPTO_spool/US10828332/runat_17062005_170038_7251/app_query.fasta_1.775
-Q=/Cgn2_1/USPTO_spool/US10828332/runat_17062005_170038_7251/app_query.fasta_1.775
-Q=/Cgn2_1/USPTO_spool/US10828332/runat_15.1 -LOOPECL=0 -LOOPECL=0 -LOOPECL=0
-UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45
-UOCALIGN=200 -THR_SCORE_SPOC -THR_MAX=100 -THR_MIN=15 -MODE=LOCAL
-USFRY=pto -NORM=ext -HEAPSIZE=560 -MINLEN=0 -MAXLEN=200000000
-USFR=US10828332_@CGN 1 1 4694_@runat_17062005_170038_7251 -NCPU=6 -ICPU=3
-NO_MANAP -LARGEQUERY -NGG_SCORES=0 -WAIT -DSPEDCOCK=100 -LONGLOG
-DBV_TIMEOUT=120 -WARN TIMEOUT=30 -THREADS=1 -XGAPPOP=10 -XGAPEXT=0.5 -FGAPOP=6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AR381454 Sequence
M92077 Rat metabot
M90518 Rat metabot
BC072635 Mus muscu
                                                                                                                       June 21, 2005, 08:56:12; Search time 7314 Seconds (without alignments) 3868.997 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                               US-10-828-332-7
3107
1 MPGVSSSLPTRMTSGFDRYF......LETPALATKQTYVTYTWHAI 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Description
                      5.1.6
Compugen Ltd.
                                                                                           nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                    4708233 segs, 24227607955 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AR381454
RATMGLURBD
RATMGLUR4A
BC072635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUMMARIES
                      GenCore version
Copyright (c) 1993 - 2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                          0.5
                                                                                                                                                                                                                                                                                          , Ygapext
, Ygapext
, Fgapext
, Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *
Query
Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             90 Dr. *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2838 3704
4488
4425
                                                                                                                                                                                                                                                                                          Xgapop 10.0 ,
Ygapop 10.0 ,
Fgapop 6.0 ,
Delop 6.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gb ba:*
gb in:*
gb om:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GenEmbl: *
                                                                                                                                                                                                                                                                          BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98.2
98.2
98.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       112::14:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3050.5
3050.5
3050.5
3023.5
                                                                                                                                                                                                  Title:
Perfect score:
                                                                                                                                                                                                                                                                        Scoring table:
```

Database :

Result Š

401

1451

421

441

1571

461

1631

481

셤

ò

중 옵

```
ROD 27-APR-1993
transcript.
                                                                                                                                                                       M92077.1 GI:205403
glutamate receptor; metabotropic glutamate receptor.
Status norvegicus (Norway rat)
Rattus norvegicus
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                   GAGCAGAAACGTGCCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCGCCACCATG
                         1272 GCCCGCGTTTCATCACCCGGCCTCGCAGCTGGCCATCACCTTCATCCTCATCTCCCTG
                                                                        CAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGACCCCTCCCACCCGGTGGTGGACTTC
                                                                                                                         CAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGGCGTGCTCAAGTGCGACATCTCG
                                                                                                                                                                                                                                 1512 TACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                       SerAsnLysPheThrGlnLysGlyAsnPheArgProAsnGlyGluAlaLysSerGluLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      norvegicus (strain Sprague-Dawley)
            AlaproArgPheIleSerProAlaSerGlnLeuAlaIleThrPheIleLeuIleSerLeu
                                                          GlnLeuLeuGlyIleCysValTrpPheValValAspProSerHisSerValValAspPhe
                                                                                                         GlnAspGlnArgThrLeuAspProArgPheAlaArgGlyValLeuLysCygAspIleSer
                                                                                                                                                                                                         TyralaileLysThrargGlyValProGluThrPheAsnGluAlaLysProileGlyPhe
                                                                                                                                                                                                                                                        ThrMetTyrThrTysThrCysIleValTrpLeuAlaPheIleProIlePheGlyThrSer
                                                                                                                                                                                                                                                                                                                                                                                                         GluGlnAsnValProLysArgLysArgSerLeuLysAlaValValThrAlaAlaThrMet
                                                                                                                                                         AspleuSerfeulleCysLeuLeuGlyTyrSerMetLeuLeuMetValThrCysThrVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nakanishi, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        калмыливы
Rat metabotropic glutamate receptor 4 mRNA, primary
M92077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 3704)
Tanabe,Y. Masu,M., Ishii,T., Shigemoto,R. and
A family of metabotropic glutamate receptors
Neuron 8 (1), 169-179 (1992)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Rattus norvegicus"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bource text: Rattus
A to mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      582 HisAlaIle 584
|||||||||
1932 CATGCCATC 1940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Original
adult cDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rattus.
                                                                                                                                                                                  1452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1872
            362
                                                            382
                                                                                                           402
                                                                                                                                   1392
                                                                                                                                                           422
                                                                                                                                                                                                          442
                                                                                                                                                                                                                                                          462
                                                                                                                                                                                                                                                                                                         482
                                                                                                                                                                                                                                                                                                                                  1632
                                                                                                                                                                                                                                                                                                                                                         502
                                                                                                                                                                                                                                                                                                                                                                                  1692
                                                                                                                                                                                                                                                                                                                                                                                                          522
                                                                                                                                                                                                                                                                                                                                                                                                                                 1752
                                                                                                                                                                                                                                                                                                                                                                                                                                                         542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 2
LATMGLURBD
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOUNCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
TITLE
JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
            8 6
                                                     ठ हे ठ
                                                                                                                          g
                                                                                                                                                         8 8 8
                                                                                                                                                                                                                           8 & 8
                                                                                                                                                                                                                                                                                                 8 6 6 6
                                                                                                                                                                                                                                                                                                                                                                                                    8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                               ે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                    671
                                                                                                                                                                                                                                                                                                                                                                                                                     LysvalileGlySerTrpThrAspHisLeuHisLeuArgIleGluArgMetGlnTrpPro 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LeuProLeuPheLeuAlaValGly11eAlaAlaThrLeuPheValValValThrPhe 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ValArgTyrAsnAspThrProlleValLysAlaSerGlyArgGluLeuSerTyrValLeu 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GlyThrCysSerLeuArgArgIlePheLeuGlyLeuGlyMetSerIleSerTyrAlaAla 341
                                                                                                                                                                                            AACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCAGGAGGGGAAGGTGCAGTTCGTG 431
                                                                                                                                                                                                                      | IleAspAlaValTyrAlaMetGlyHisAlaLeuHisAlaMetHisArgAspLeuCysPro 101
                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                  AspAlaProGlyArgTyrAspIleTyrGlnTyrGlnLeuArgAsnGlySerAlaGluTyr 161
                                                                                                                                                                                                                                                                                                                                                                                                                                            731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GlySerGlyGlnLeuProArgSer11eCysSerLeuProCysGlnProGlyGluArg 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           851
                                                                                                                                                                                                                                   251
                                                                      61
                                                                                                                                                                       81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TyrGlnValAspArgTyrThrCysLysThrCysProTyrAspMetArgProThrGluAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LeuAlaGly1]ePheLeuCysTyrAlaThrThrPheLeuMetIleAlaGluProAspLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGACCTG
                                      PheHisCysLysLeuSerArgHisAlaLeuLysLysGlySerHisIleLysLysCysThr
                                                                                                                                              Trecarrecaagresececeacecercaagaagegaagecacareaagagegeece
                                                                                                                                                                                                                                                                      GlyArgValGlyLeuCysProArgMetAspProValAspGlyThrGlnLeuLeuLysTyr
                                                                                                                                                                                                                                                                                                                                                                                   GACGCACCAGGGCGCTACGACATCTACCAGTACCAACTGCGCCAATGGCTCGGCCGAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCTGCCCTGCCAGCCCGGGGAGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LysLysThrValLysGlyMetAlaCysCysTrpHisCysGluProCysThrGlyTyrGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Taccaagregaccecracaccreraagaccrecccraceacareceeccacacagagae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GlyValSerSerLeuProThrArgMetThr---SerGlyPheAspArgTyrPheSer
                                                                                                                                                                       AsnArgGluArgIleGlyGlnAspSerAlaTyrGluGluGlyLysValGlnPheVal
US-10-828-332-7 (1-584) x AR381454 (1-2838)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             732
                        m
                                                                                                 252
                                                                                                                        42
                                                                                                                                              312
                                                                                                                                                                                            372
                                                                                                                                                                                                                                                                                               492
                                                                                                                                                                                                                                                                                                                                               552
                                                                                                                                                                                                                                                                                                                                                                      142
                                                                                                                                                                                                                                                                                                                                                                                              612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1212
                                                                        22
                                                                                                                                                                                                                       82
                                                                                                                                                                                                                                              432
                                                                                                                                                                                                                                                                                                                       122
                                                                                                                                                                                                                                                                                                                                                                                                                       162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     342
                                                                                                                                                                       62
                                                                                                                                                                                                                                                                      102
                                                                                                                                                                                                                                                                                                                                                                                                                                              672
```

8 8 8 8

8 % 8

중 음

g

ò

임

કે

ઠે

셤

g

ઠે

1871

561

1811

2037

ઠે a ò g δ g ઠે

음 장

g ઠે 8 & 8

8 6 8 6

328

2097

368

348

```
2517
                                                                                                                                                                                                                                                            GCCTCGCAGCTGGCCATCACCTTCATCCTCATCTCCCTGCAGCTGCTCGCACCTGCACCTG
                                                                                                                                                                                                                                                                                                                              ValGlyIleAlaAlaThrLeuDheValValValThrPheValArgTyrAgnAspThrPro
                                                                                                                                                                   | IleTyrArgllePheGluGlnGlyLygArgSerValSerAlaProArgPheIleSerPro
                                                                                                                                                                                                     ATTTACCGCATCTTTGAGCAGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCG
                                                                                                                                                                                                                           AlaSerGlnLeuAla11eThrPheIleLeuIleSerLeuGlnLeuLeuGlyIleCysVal
                                                                                                                                                                                                                                                                                           ProArgPheAlaArgGlyValLeuLygCysAspIleSerAspLeuSerLeuIleCysLeu
                                                                                                                                                                                                                                                                                                       CCCCGCTTTGCCAGGGGGGGTGCTCAAGTGCGACATCTCGGACCTGTCCCTCATCTGCCTG
                                                                                                                                                                                                                                                                                                                                                               ValProGluThrPheAsnGluAlaLysProlleGlyPheThrMetTyrThrThrCysIle
                                                                                                                                                                                                                                                                                                                                                                          GTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGCTTCACCATGTACACCTGCATT
                                                                                                                                                                                                                                                                                                                                                                                                ValTrpLeuAlaPheIleProIlePhePheGlyThrSerGlnSerAlaAspLysLeuTyr
                                                                                                                                                                                                                                                                                                                                                                                                        GTCTGGCTGGCCTTCATCCCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGTGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                         ieuTyrMetProlygValTyrIleIleLeuPheHisProGluGlnAsnValProLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GlyAenPheArgProAenGlyGluAlaLysSerGluLeuCysGluAenLeuGluThrPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAGCTGTGTGAGAACCTGGAGACCCCA
                                                                                                                                                          IlePheLeuGlyLeuGlyMetSerIleSerTyrAlaAlaLeuLeuThrLysThrAsnArg
                                                                                                                                                                                                                                                                                                                                                                                                                                  IleGlnThrThrThrLeuThrValSerValSerLeuSerAlaSerValSerLeuGlyMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AlaLeuAlaThrLygGlnThrTyrValThrTyrThrAgnHigAlaIle 584
                                         1798
                                                                          1858
                                                                                                         1918
                                                                                                                                                                           2038
                                                                                                                                                                                                            2098
                                                                                                                                                                                                                                                                              2218
                                                                                                                                                                                                                                                                                                                                                                                                                 2458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     269
                                                         269
                                                                                                                                           1978
                                                                                                                                                                                                                                            2158
                                                                                                                                                                                                                                                                                                               2278
                                                                                                                                                                                                                                                                                                                                               2338
                                                                                                                                                                                                                                                                                                                                                                                 2398
                                                                                                                                                                                                                                                                                                                                                                                                                                                  2518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2758
                        249
                                                                                          289
                                                                                                                           309
                                                                                                                                                          329
                                                                                                                                                                                            349
                                                                                                                                                                                                                            369
                                                                                                                                                                                                                                                              389
                                                                                                                                                                                                                                                                                              409
                                                                                                                                                                                                                                                                                                                                429
                                                                                                                                                                                                                                                                                                                                                                449
                                                                                                                                                                                                                                                                                                                                                                                                 469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   549
                                                                                                                                                                                                                                                                                                                                                                                                                                  489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   509
       6 B
                                    셤
                                                    ò
                                                                      요
                                                                                         δ
                                                                                                      셤
                                                                                                                         ò
                                                                                                                                     8 & 8
                                                                                                                                                                                        6 B 6
                                                                                                                                                                                                                                      중 읍
                                                                                                                                                                                                                                                                        ያ ያ
                                                                                                                                                                                                                                                                                                           중 음
                                                                                                                                                                                                                                                                                                                                           ద
                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                             8 8
                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1677
                                                                                                                                                                                                                                                     1137
                                                                                                                                                                                                                                                                                                                                                       1317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1737
                                                                                                                                                                                                                                                                    1377
                                                                                                                                                                                                                                                                                                                                                                                                                         1437
                                                                                                                                                                                                                                                                                                                                                                                                                                         1617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          188
                                                                                                                                                                                                                                                                                                                                                                         108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             228
                                                                                                                                                   957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CysLysThrCysProTyrAspMetArgProThrGluAsnArgThrSerCysGlnProlle 248
                                                                                                                                                                                                                                                                                                                                       88
                                                                                                                                                                                                    14
                                                                                                                                                                                                                                                                                                       68
                                                                                                                                                                                                                                                                                                     ABPSerhlaTyrGluGluGlyLygValGlnPheValIleAspAlaValTyrAlaMet
                                                                                                                                                                                                                                                                                                                                                                       ABPHABLEUHABLEUATGI 1eGluArGMEtGInTrpProGlySerGlyGlnGlnLeuPro
                                                                                                                                           AAGAGTGCCCCTGTGCGCCCTTGAGGAGGTGGCCGAGGGCGCAGTCACCATTCTCCCC
                                                                                                                                                                                                                                     AAGAGGATGTTCGAGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ArgSerIleCysSerLeuProCysGlnProGlyGluArgLysBlysBhrValLysGlyMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AlaCysCysTrpHisCysGluProCysThrGlyTyrGlnTyrGlnValAspArgTyrThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTTGCTGCTGGCACTGCGAGCCCTGCACCGGGTACCAGTACCAGTGCGAGTGGACCGCTACCACC
                                                                                                                                                                                    GCTCGCAGGGCCAACCAGACCGGCCACTTCTTTTGGATGGGTTCTGATAGCTGGGGCTCC
                                                       3704
583
0
1
53
                                                                                                                                   MetProGlyValSerSerSerLeuProThrArgMetThrSer--
                                                        Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
/strain="Sprague-Dawley"
/db_xref="taxon:10116"
/dev_stage="adult"
70. _2805
                                                                                                                  (1-3704)
                                                                                                                 * RATMGLURBD
                                                       4.52e-246
3050.50
91.67%
91.67%
                                                                                                                  US-10-828-332-7 (1-584)
                                                                       Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                Alignment Scores
                                                                                                                                                                                                                                                     1078
                                                                                                                                                                                                                                                                                                                       1198
                                                                                                                                                                                                                                                                                                                                                       1258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1498
                                                                                                                                                                  14
                                                                                                                                                                                                                                                                                      1138
                                                                                                                                                                                                                                                                                                                                                                                                                         1378
                                                                                                                                                                                                                                                                                                                                                                                                                                                          1438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1618
                                                                                                                                                                                    928
                                                                                                                                                                                                   14
                                                                                                                                                                                                                                     15
                                                                                                                                                                                                                                                                      29
                                                                                                                                                                                                                                                                                                       49
                                                                                                                                                                                                                                                                                                                                        69
                                                                                                                                                                                                                                                                                                                                                                         83
                                                                                                                                                                                                                                                                                                                                                                                                          109
                                                                                                                                                                                                                                                                                                                                                                                                                                          129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               229
                                                        . No. .
```

2217

388

2277

428

408

2397

468

488

448

2577

508

2637

548

528

8 8 8 8 8

음 중

ద ઠે

ያ ያ

2697

568

a

6 6 6

g ઠે 8 8

```
/ GOGOD SEARCE 19 POLICATE 19 POLICAGO SEARCE 19 PO
Rat metabotropic glutamate receptor (GLUR4) mRNA, complete cds. M90518 G1:205400 metabotropic glutamate receptor (RLUR4) mRNA, complete cds. M90518.1 G1:205400 metabotropic glutamate receptor. Rattus norvegicus (Norway rat) Rattus norvering
                                                                                                                                                                                                                                                           Rattus norvegicus
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                    O'Hara, P.J., Sheppard, P.O., Thogersen, H., Venezia, D., Addeman, B.A., McGrane, V., Houamed, K.M., Thomsen, C., Gilbert, T.L. and Mulvihill, E.R.
The ligand-binding domain in metabotropic glutamate receptors is related to bacterial periplasmic binding proteins
Neuron 11 (1), 41-52 (1993)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Inc.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Directors:
Direct Submission
Submitted (01-APR-1992) Patrick J. O'Hara, ZymoGenetics,
Seattle, WA 98105, USA
Original source text: Rattus norvegicus cDNA to mRNA.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Rattus norvegicus"
/mol type="mRNA"
/db_xref="taxon:10116"
/tissue type="brain"
1. 4488
1. .4488
/gene="GLUR4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              note="putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        855. .3593
/gene="GLUR4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 (bases 1 to 4488)
O'Hara, P.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .4488
                                                                                                                                                                                                                                                                                                                                                                         Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8338667
                                                          DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
```

8666

중 음 ò 음 영 양

ઠે

음 중 음

ठे g a

& A

8

g

ò

ઠે

8 6 8

```
4488
583
0
1
53
     Length:
Matches:
Conservative:
Mismatches:
      5.85e-246
3050.50
91.67*
91.67*
98.18*
                   Percent Similarity:
Best Local Similarity:
Query Match:
DB:
Alignment Scores:
Pred. No.:
       No.:
```

ORIGIN

Score:

1684 ATGCCAGGGTATCATCATCTTTGCCAACGAGGATGACATC-AGGAGGGTGTTGGAGGCA 1742 Met ProGlyVal SerSerSerLeu ProThrArgMet ThrSer---------(1-4488)x RATMGLUR4A US-10-828-332-7 (1-584) Н

ð 셤

Gaps:

2342 2642 2042 2102 2162 2222 2282 2402 2462 2522 2582 2702 2762 TyralaThrThrPheLeuMetIlealaGluProAspLeuGlyThrCysSerLeuArgArg 328 1863 AAGAGGATGTCTGTTCGAGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAAC 1922 108 128 148 168 188 308 1803 AAGAGTGCCCCTGTGCTGCGCCTTGAGGAGGTGGCCGAGGGCGCAGTCACCATTCTCCCC 1862 208 228 248 268 14 48 68 88 14 1983 CACGCGCTCAAGAAGGAAGCCACATCAAGAAGTGCACCAACCGAGAGGGCGCATCGGGCAG GlyIlealaGlyAsnProValThrPheAsnGluAsnGlyAspAlaProGlyArgTyrAsp ValGivileAlaAlaThrLeuPheValValValThrPheValArgTyrAsnAspThrPro 289 IlevallysAlaSerGlyArgGluLeuSerTyrValLeuLeuAlaGlyIlePheLeuCys 1743 GCTCGCAGGGCCAACCAGACGGCCACTTCTTTTGGATGGGTTCTGATAGCTGGGGCTCC 169 AsphisLeuhisLeuhrgIleGluhrgMetGlnTrpProGlySerGlyGlnGlnClnLeuPro 2463 GCTTGCTGCTGCTGCACCCTGCAGCCCTGCAGTACCAGTACCAAGTGGACCGCTACAC -------GlyPheAspArgTyrPheSerSerArgThrLeuAspAsnAsn Argargasn11eTrpPhealaGluPheTrpGluAspAsnPheHisCysLysLeuSerArg HisalaLeuLysLysGlySerHisIleLysLysCysThrAsnArgGluArgIleGlyGln 149 IletyrGlntyrGlnteuargAsnGlySerAlaGluTyrLysValIleGlySerTrpThr 2283 ATCTACCAGTACCAACTGCGCGAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGGACA GACCACCTGCACCTCAGAATAGAGCGGATGCAGTGGCCAGGGAGTGGCCAGGGAGTGCCCG AlaCysCysTrpHisCysGluProCysThrGlyTyrGlnValAspArgTyrThr CysLysThrCysProTyrAspMetArgProThrGluAsnArgThrSerCysGlnProIle ATCGTCAAGGCCTCGGGCCGGGAGCTGAGGCTACGTGCTGGCGGGGCATCTTTCTGTGC ArgMetAspProValAspGlyThrGlnLeuLvsTyrIleArgAsnValAsnPheSer ArgSex11eCysSexLeuProCysGlnProGlyGluArgLysLysThrValLysGlyMet 2163 2223 2343 2583 15 53 49 8 2103 109 129 189 209 229 249 269 2643 2703 309 14 14

g ઠે 8 ઠે g ò g ઠ a ઠે ద ઠે 윱 δ 셤 ò g δ g ઠે g ò 유

```
Contact: MGC help desk
Email: ggapbs-r@mail.nih.gov
Tissue Procurement: Dr. Jim Lin, University of Iowa
Tissue Procurement: Dr. Jim Lin, University of Iowa
CDNA Library Preparation: M. Bento Soares, University of Iowa
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: University of Iowa, Dr. M. Bento Soares and Dr.
Thomas L. Casavant.
Web site: http://genome.uiowa.edu
Contact: bento-soares@uiowa.edu; tom-casavant@uiowa.edu
Bonaldo, M.F., Akabogu,I., Bair,T., Bair,J., Crouch,K., Davis,A.,
Fishler,K., Keppel,C., Kucaba,T., Lebeck,M., Melo,A., Schaefer,K.,
Scheetz,T., Smith,C., Snir,E., Tack,D., Trout,K., Walters,J.,
Casavant,T., Soares,M.B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1733 GEIGCAGTCACCAITCTICCCAAGAGGACGICTGTGCGAGGGITTGACCGATACTICTCC 1792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1793 AGCCGCACGCTTGACAACAACAAGGCGCAACATCTGGTTTGCTGAGTTCTGGGAGGACAAC 1852
McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S., Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W., Worlla, D., K., Murny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A., Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S., Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y., Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D., Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M., Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E., Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.
                                                                                                                                                                                                                                                                                                                                                                           Direct Submission
Submitted (03-070-2004) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Clone distribution: MGC clone distribution information can be for through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: Plate: Row: Column: 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SerargThrLeuaspasnasnargargasnIleTrpPhealaGluPheTrpGluaspasn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GlyValSerSerLeuProThrArgMetThr---SerGlyPheAspArgTyrPheSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="taxon:10090"
/clone="IMAGE:6850174"
/tissue type="Brain, mouse, 13.5,14.5,16.5,17.5 of tone_lib="NHH BMAP_EYO"
/loh host="DH108"
/note="Vector: pYX-ASC"
                                                                                                                                                                                                                                         human and mouse cDNA sequences
Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
12477932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NIH-MGC Project URL: http://mgc.nci.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Mus musculus"
/mol_type="mRNA"
/strain="C57BL/6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   x BC072635 (1-4425)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.07e-243
3023.50
98.28%
97.77%
                                                                                                                                                                                                                                                                                                                             (bases 1 to 4425)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . .4425
                                                                                                                                                                                                                                                                                                                                                       Strausberg, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-828-332-7 (1-584)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.:
                                                                                                                                                                                                                                                                                               PUBMED
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REMARK
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (Bases I to 4425)
Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buttow, K.H., Schaefer, C.F., Bhat, M.K.,
Hopkins, R.F., Jordan, H., Moore, T., Wang, J., Hsieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,
     2883 ATTTACCGCATCTTTGAGCAGGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCG 2942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGGGCTACAGCATGCTGCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGC 3182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3362
                                                                                                                                                                                                                          2943 GCCTCGCAGCTGGCCATCACCTTCATCTCCCTGCAGCTGCTCGCGTGCTGCGTG 3002
                                                                                                                                                                                                                                                                                                                             3003 TGGTTCGTGGTGGACCCCTCCCACTCGGTGGACTTCCAGGACCAACGACACTTGAC 3062
                                                                                                                                                                                                                                                                                                                                                                                                                           3483 GGCAACTICAGGCCCAATGGGGAAGCCAAATCAGAGCTGTGTGAGAACCTGGAGACCCCA 3542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3422
                                                                                                     368
                                                                                                                                                                                                                                                                                                    408
                                                                                                                                                                                                                                                                                                                                                                                                  428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ROD 25-JUN-2004
                                                                                                                                                                                                   388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              469 ValTrpLeuAlaPheIleProIlePhePheGlyThrSerGlnSerAlaAspLysLeuTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              349 IleTyrArgilePheGluGlnGlyLyBArgSerValSerAlaProArgPheIleSerPro
                                                                                                                                                                                                                                                                                                 TrpPheValValAspProSerHisSerValValAspPheGlnAspGlnArgThrLeuAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LeuGlyTyrSerMetLeuLeuMetValThrCysThrValTyrAlaileLysThrArgGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTCTGGCTTGATCCCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LeuTyrMetProLysValTyrIleIleLeuPheHisProGluGlnAsnValProLysArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3363 CTCTACATGCCCAAAGTCTACATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LysArgSerLeuLysAlaVal7hrAlaAlaThrMetSerAsnLysPheThrGlnLys
                                                                                                                                                                                                   AlaSerGlnLeuAlaIleThrPheIleLeuIleSerLeuGlnLeuLeuGlyIleCysVal
                                                                                                                                                                                                                                                                                                                                                                                               ProArgPheAlaArgGlyValLeuLysCysAspIleSerAspLeuSerLeuIleCysLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IleGlnThrThrLeuThrValSerValSerLeuSerAlaSerValSerLeuGlyMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GlyAsnPheArgProAsnGlyGluAlaLysSerGluLeuCysGluAsnLeuGluThrPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BC072635 4425 bp mRNA linear Was musculus cDNA clone IMAGE:6850174, partial cds. BC072635.1 GI:49257159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus
                                                                                                                                                                                                                                                                                               389
                                                                                                                                                                                                   369
                                                                                                                                                                                                                                                                                                                                                                                                  409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BC072635
```

유 δ

21

ဖ

3172

481

461

3412

561

3352

541

521

중 음

ò g 8 8

ያ ያ

셤 ઠે

8 & 8

8 8 8

a

8 8 8

සි දි g ò g ò d ò 요 ò

```
PAT 08-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 (bases 1 to 2736)
Flor, P.Josef., Kuhn, R., Lindauer, K., Puttner, I. and Knopfel, T.
Human metabotropic glutamate receptor subtypes (hmR4, hmR6, hmR7)
and related DNA compounds
Patent: US 6228610-A 108-MAY-2001;
Location/Qualifiers
                                   3113 ACCATGTACACCACCTGCATCGTCTGGCTGGCCTTCATCCCCATCTTTTTGGCACCTCG
                                                                                                                                 GAGCAGAAAGGTGCCCAAGCGCAAGCGCAGCCTCAAAGCCGTTGTTGTCACCGCCGCCACATG
                                                                                                                                                                                                                                                                          GCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCATCCTCTTCCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 988 GGIGCIIGICACGAICCICCCCAAGAGGAIGICCGIACGAGGCIICGACCGCIACIICIC
                                                                                  ThrMetTyrThrThrCyslleValTrpLeuAlaPheIleProIlePheGlyThrSer
                                                                                                                                                                                 AlaSerValSerLeuGlyMetLeuTyrMetProLysValTyrIleIleLeuPheHisPro
                                                                                                                                                                                                                               GluGlnAsnValProLysArgLysArgSerLeuLysAlaValValThrAlaAlaThrMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GlyvalSerSerSerLeuProThrArgMetThr---SerGlyPheAspArgTyrPheSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2736
564
6
12
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                             AR149574 2736 bp
Sequence 1 from patent US 6228610.
AR149574 GI:15114165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1. .2736
/organism="unknown"
/mol_type="unassigned"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     x AR149574 (1-2736)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2.21e-242
3004.50
97.77$
96.74$
                                                                                                                                                                                                                                                                                                                                                                                             3473 CATGCAATC 3481
                                                                                                                                                                                                                                                                                                                                                                         582 HisAlaile 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-828-332-7 (1-584)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .
Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scores:
                                                                                                                                                                                                         3233
                                                                                                                                                                                                                                                     3293
                                                                                                                                                                                                                                                                                                    3353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             e
                2993
                                                                                                                                    482
                                                                                                                                                          3173
                                                                                                                                                                                 502
                                                                                                                                                                                                                                522
                                                                                                                                                                                                                                                                             542
                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 5
AR149574
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment S
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            යු
                                                     8 & 8
                                                                                                                            8 6 6 6
                                                                                                                                                                                                                              8 8 8
                                                                                                                                                                                                                                                                                             입
                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                8 8
                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                    2212
                                                                                                                                                                                                                                                                 2272
                                                                                                                                                                                                                                                                                                                  2332
                                                                                                                                                                                                                                                                                                                                                                                                                                                           2512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2992
   2392
                                                                                                                                                                                                                                                                                                                                                                                                            raccaderedaccecracacererandacerececerardacarececececesadaac 2452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         381
                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                 121
                                                                                                                                                                                              AspAlaProGlyArgTyrAspIleTyrGlnTyrGlnLeuArgAsnGlySerAlaGluTyr 161
                                                                                                                                                                                                                                                                                          201
                                                                                                                                                                                                                                                                                                                                        221
                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                    261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AspleuSerLeulleCysLeuLeuGlyTyrSerMetLeuLeuMetValThrCysThrVal 441
                                                 GlySerGlyGlnGlnLeuProArgSerIleCysSerLeuProCysGlnProGlyGluArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATCAGAAACGTCAACTTCTCAGGCATCGCCGGGAACCCGGTGACCTTCAACGAGAACGGA
                                                                                                                                                                                                                                           LysVallleGlySerTrpThrAspHisLeuHisLeuArglleGluArgMetGlnTrpPro
                                                                                                                                                                                                                                                          AAGGTCATCGGCTCATGGACAGACCACTTGCACCACAAATAGAGCGGATGCAGTGGCCA
                                                                                                                                                                                                                                                                                                                                        LysLysThrValLysGlyMetAlaCysCysTxpHisCysGluProCysThrGlyTyrGln
                                                                                                                                                                                                                                                                                                                                                    TyrGlnValAspArgTyrThrCysLysThrCysProTyrAspMetArgProThrGluAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                               LeuProLeuPheLeuAlaValValGlyIleAlaAlaThrLeuPheValValValThrPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ValArgTyrAsnAspThrProlleValLysAlaSerGlyArgGluLeuSerTyrValLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GlyThrCysSerLeuArgArg1lePheLeuGlyWeuGlyMetSerIleSerTyrAlaAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LeuLeuThrLysThrAsnArgIleTyrArgIlePheGluGlnGlyLyBArgSerValSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AlaProArgPheIleSerProAlaSerGlnLeuAlaIleThrPheIleLeuIleSerLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GlnAspGlnArgThrLeuAspProArgPheAlaArgGlyValLeuLysCysAspIleSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGGACCACAGGGGACACTTGACCCCCGCTTCGCCCGGGGTGTGCTCAAGTGTGACATCTCG
                                                                                                 GlyArgValGlyLeuCysProArgMetAspProValAspGlyThrGlnLeuLeuLysTyr
                                                                                                                                               IleArgAsnValAsnPheSerGlyIleAlaGlyAsnProValThrPheAsnGluAsnGly
                                                                                                                                                                                                           GACGCGCCAGGCCTTATGACATCTACCAGTACCAACGTCGCAACGCTCGGCTGAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                   ArgThrSerCysGlnProlleProlleValLysLeuGluTrpAspSerProTrpAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGCCCCTCTTCCTGGCTGTGGGGGCATTGCTGCCTGCTCGCTGTTCGTGGTGGTCACTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGCGCTACAACGACACTCCGATCGTCAAGGCCTCGGGCCGGGGAGCTGAGCTACGTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LeuAlaGlyIlePheLeuCysTyrAlaThrThrPheLeuMetIleAlaGluProAspLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGGCGGCATCTTTTCTCTGCTATGCCACCACCTTCCTCATGATCGCAGAGCCTGACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGACCTGTTCACTCCGCCGCATCTTCCTGGGGCTTGGCATGAGCATCAGCTACGCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2033
                                                                                                                                                                       2093
                                                                                                                                                                                                                                                                                                                                                                 2333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2513
                           1913
                                                                           1973
                                                                                                                                                122
                                                                                                                                                                                               142
                                                                                                                                                                                                                     2153
                                                                                                                                                                                                                                              162
                                                                                                                                                                                                                                                                    2213
                                                                                                                                                                                                                                                                                          182
                                                                                                                                                                                                                                                                                                                  2273
                                                                                                                                                                                                                                                                                                                                         202
                                                                                                                                                                                                                                                                                                                                                                                        222
                                                                                                                                                                                                                                                                                                                                                                                                             2393
                                                                                                                                                                                                                                                                                                                                                                                                                                      242
                                                                                                                                                                                                                                                                                                                                                                                                                                                            2453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   422
                                                   82
                                                                                                  102
```

1047

1107

2307

461

2427

481

```
unidentified
unidentified
unclassified.
sw unidentified
unclassified.
1 (bases 1 to 2738)
1 (bases 1 to 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=1
/product="HMGLUR4"
/protein_id="CAA02140.1"
/bx.zref=id1:2298840"
/bx.zref=id1:2298840"
/translation="MPGKRGLGWWWARLPLCLLLSIYGPWMPSSLGKPKGHPHWNSIR
IDGDITLGGLPPVHGRGSEGKPCGELKKEKGIHRLEAMLFALDRINNDPDLLPNITLG
ARILDTCSRDTHALEQSLIFVQALIEKDGTEVRCGSGGPPIITKPERVVGVIGASGSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT 07-MAR-1997
                                                                                                                                                                                                                                                                                                                                                     CAGGACCAGCGGACACTCGACCCCCGCTTCGCCAGGGGTGTGCTCAAGTGTGACATCTCG
                                                                          GACCTGTCGCTCATCTGCCTGCTGGGCTACAGCATGCTCATGGTCACGTGCACCCGTG
                                                                                                                CAGTCGGCCGACAAGCTGTACATCCAGACGACGACGCTGACGGTCTCGGTGAGTCTCGAGC
                                                                                                                                                                                                                                                                                           CysGluAsnLeuGluThrProAlaLeuAlaThrLysGlnThrTyrValThrTyrThrAsn
||||||||||||||||
TGCGAGAACCTTGAGGCCCCAGCGCTGGCCCACAACAGACTTACGTCACTTACACCAAC
GlnAspGlnArgThrLeuAspProArgPheAlaArgGlyValLeuLysCysAspIleSer
                                                                                                                                                                                           ACCATGTACACCACTTGCATCGTCTGGCTGGCCTTCATCCCCCATCTTTGGCACCTCG
                                                        AspleuSerleuIleCysleuLeuGlyTyrSerMetLeuLeuMetValThrCysThrVal
                                                                                                                                                                          GlnSerAlaAspLysLeuTyrIleGlnThrThrThrLeuThrValSerValSerLeuSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .2738
/organism="unidentified"
/mol_type="unassigned DNA"
/db_xref="taxon:32644"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2738 bp
Sequence 1 from Patent WO9508627.
A43637.1 GI:2298839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATGCAATC 2736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HisAlaIle
                            2188
                                                                                   2248
                                                                                                                                               2308
                                                                                                                                                                                                       2368
                                                                                                                                                                                                                                                                 2428
                                                                                                                                                                                                                                                                                                                          2488
                                                                                                                                                                                                                                                                                                                                                                                    2548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2728
 402
                                                         422
                                                                                                                   442
                                                                                                                                                                                                                                                                                                                                                                                                                                             2608
                                                                                                                                                                          462
                                                                                                                                                                                                                                    482
                                                                                                                                                                                                                                                                                              502
                                                                                                                                                                                                                                                                                                                                                       522
                                                                                                                                                                                                                                                                                                                                                                                                                542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 6
A43637
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOUNCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PEATURES
                   g
                                                        8 8
                                                                                                       8 & 8 &
                                                                                                                                                                                                                           6 8 6
                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                               8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                   음 장
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
          1227
                                                                                                                                                             1287
                                                                                                                                                                                   1407
                                                                                                                                                                                                                                                                                                                                       1467
                                                                                                                                                                                                                                                                                                                                                                                                1527
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2007
                                                                                                                                                                                                                                                141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TACCAGGTGGACCGCTACACCTGTAAGACGTGTCCCTATGACATGCGGCCCACAGAGAAC 1707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGCCCCTCTTCCTGGCCGTGGTGGGCATCGCTGCTGCTGTTTCGTGGTGATCACCTTT 1827
                                                                                                                                101
                                                                                                                                                                                                                                                                                                         AspalaProGlyArgTyrAspIleTyrGlnTyrGlnLeuArgAsnGlySerAlaGluTyr 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                381
                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                             201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          401
                                                                      83
                                                                                                                           122 IleArgAsnValAsnPheSerGlyIleAlaGlyAsnProValThrPheAsnGluAsnGly
                                                                                                                                                                                                                                                                                                                                    1408 GATGCGCCTGGCCCTATGACATCTACCAGTGCGCCAACGATTCTGCCGAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                           1348 ATCCGAAACGTCAACTTCTCAGGCATCGCAGGAACCCTGTGACCTTCAATGAGAATGGA
                                                                                                                                                                                                                                                                                                                                                                   LysVallleGlySerTrpThrAspHisLeuHisLeuArglleGluArgMetGlnTrpPro
                                                                                                                                                                                                                                                                                                                                                                                       AAGGTCATTGGCTCCTGGACTGACCACCTGCACCTTAGAATAGAGCGGATGCACTGGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AlabroArgPheIleSerProAlaSerGlnLeuAlaIleThrPheIleLeuIleSerLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TyrGlnValAspArgTyrThrCysLysThrCysProTyrAspMetArgProThrGluAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LeuAlaGlyIlePheLeuCysTyrAlaThrThrPheLeuMetIleAlaGluProAspLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GlyThrCysSerLeuArgArg11ePheLeuGlyLeuGlyMetSer11eSerTyrAlaAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AsnArgGludrgIleGlyGlnAspSerAlaTyrGluGluGlyLysValGlnPheVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LeuProLeuPheLeuAlaValValGlyIleAlaAlaThrLeuPheValValValThrPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ValArgTyrAsnAspThrProlleValLysAlaSerGlyArgGluLeuSerTyrValLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGGCAGGCATCTTCCTGTGCTATGCCACCACCTTCCTCATGATCGCTGAGCCCGACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LeuLeuThriysThrAsnArgIleTyrArgIlePheGluGlnGlyLysArgSerValSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGCTCACCAAGACCAACCGCATCTACCGCATCTTCGAGCAGGGCAAGCGCTCGGTCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCCCACGCTTCATCAGCCCCGCCTCACAGCTGGCCATCACCTTCAGCCTCATCTCGCTG
                                       1108
                                                                                                1168
                                                                                                                             82
                                                                                                                                                         1228
                                                                    62
                                                                                                                                                                                      102
                                                                                                                                                                                                                                                                                                         142
                                                                                                                                                                                                                                                                                                                                                                                                1468
                                                                                                                                                                                                                                                                                                                                                                                                                                                          1528
            42
                                                                                                                                                                                                                   1288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1768
                                                                                                                                                                                                                                                                                                                                                                   162
                                                                                                                                                                                                                                                                                                                                                                                                                             182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          382
                                                                                        8 8 8 8
                                                                                                                                                                                                                                                                                             8 6 8 6
            ò
                                 8
                                                         ઠે
                                                                                                                                                                                                          8 & 8
                                                                                                                                                                                                                                                                                                                                                                                                                  6 B 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6 6 6 6 6 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8 6 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  음 상 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              કે
```

2547

541

2727

561

2487

521

us-10-828-332-7.rge

CysGluAsnLeuGluThrProAlaLeuAlaThrLysGlnThrTyrValThrTyrThrAsn ||||||||||||||||| TGCGAGAACCTTGAGGCCCCAGCGCTGGCCAAACAGACTTACGTCACTTACACCAAC CATGCAATC HisAlaile 6 B 6 B 6 B 6 B 6 g 8 8 8 8 8 8 B & B & B & B

```
1647
                                                                                                                                                                                                           1527
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1767
                                                                                                                                                                                                                                       362 AlaProArgPheIleSerProAlaSerGlnLeuAlaIleThrPheIleLeuIleSerLeu 381
2068 GCCCCACGCTTCATCAGCCCCGCCTCACACACATCACACCTTCAGCCTCATCTCGCTG 2127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2367
                                                                                                                      161
                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                  221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ThrMetTyrThrThrCysIleValTrpLeuAlaPheIleProIlePhePheGlyThrSer 481
                                                         LysLysThrValLysGlyMetAlaCysCysTrpHisCysGluProCysThrGlyTyrGln
                                                                                                                                                                                                                                                                                                                  GlyArgValGlyLeuCysProArgMetAspProValAspGlyThrGlnLeuLeuLysTyr
                    GCCCCCGTGGGCCTCTGCCCCGCGCATGGACCCTGTAGATGGCACCCAGCTGCTTAAAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                       ArgThrSerCysGlnProlleProlleValLysLeuGluTrpAspSerProTrpAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gracectracaaceacaceccarcercaaeeccrceeeccereaacreaecracere
                                                                                                                                                                               LysValIleGlySerTrpThrAspHisLeuHisLeuArgIleGluArgMetGlnTrpPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ValArgTyzAsnAspThrProlleValLysAlaSerGlyArgGluLeuSerTyrValLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGGACCAGCGGACACTCGACCCCCGCTTCGCCAGGGGTGTGCTCAAGTGTGACATCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TyralaileLysThrArgGlyValProGluThrPheAsnGluAlaLysProileGlyPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GlnAspGlnArgThrLeuAspProArgPheAlaArgGlyValLeuLysCysAspIleSer
                               1288
                                                            122
                                                                                       1348
                                                                                                                                                                                                             1468
                                                                                                                                                                                                                                                                      1528
                                                                                                                                                                                                                                                                                                                                 1588
                                                                                                                                                                                                                                                                                                                                                               222
                                                                                                                                                                                                                                                                                                                                                                                           1648
                                                                                                                                                                                                                                                                                                                                                                                                                       242
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               442
   102
                                                                                                                                                                                                                                          182
                                                                                                                                                                                                                                                                                                  202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          462
                                                                                                                                                                               162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          402
                     8 & 8
                                                                                                            6 B 6
                                                                                                                                                                                                   g
                                                                                                                                                                                                                                    8 B 8
                                                                                                                                                                                                                                                                                                                         음 중
                                                                                                                                                                                                                                                                                                                                                                                중 음
                                                                                                                                                                                                                                                                                                                                                                                                                                              성 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           දු ද
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6 6 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   සු දු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                            1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738
1. .. 2738

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1107
                 18-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41
                                                                                                                                             Flor, P.J., Kuhn, R., Lindauer, K., Puettner, I. and Knoepfel, T. Human metabotropic glutamate receptor subtypes (hmr4, hmr6, hmr7) and related dna compounds
Patent: EP 1199359-A 1 24-APR-2002;
Novartis AG (CH)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | IleapalavalTyralametGlyHisalaLeuHisAlametHisArgAspLeuCysPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GlyValSerSerLeuProThrArgMetThr---SerGlyPheAspArgTyrPheSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SerArgThrLeudspAsnAsnArgArgAsnIleTrpPheAlaGluPheTrpGluAspAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PheHisCysLysLysLeuSerArgHisAlaLeuLysLysGlySerHisIleLysLysCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AACCGTGAGCGAATTGGGCAGGATTCAGCTTATGAGCAGGAGGGGAAGGTGCAGTTTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AsnArgGluArg1leGlyGlnAspSerAlaTyrGluGluGlyLysValGlnPheVal
                 PAT
                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2738
564
6
12
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                /organism="unidentified"
/mol_type="unassigned DNA"
/db_xref="taxon:32644"
            AX427263 2738 bp
Sequence 1 from Patent EP1199359,
AX427263
AX427263.1 GI:21530616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (1-2738)
                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-828-332-7 (1-584) x AX427263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2.21e-242
3004.50
97.77$
96.74$
                                                                                   unidentified
unidentified
unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1228
                        DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ..
No..
                                                                                                                                REFERENCE
AUTHORS
TITLE
AX427263
LOCUS
                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                  CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score:
```

q

ઠે

ઠે

ያ ያ g g

ઠે

g

ઠે

g

ò 셤 ò

셤 ઠે 셤 ò 셤 ð

ઠે

```
Direct Submission

Submitted (15-JUL-2003) Takao Isogai, FLJ Project (HRI Team); 2-6-7

Razusa-Kametari, Kisarazu, Chiba 292-0818, Japan

Razusa-Kametari, Kisarazu, Chiba 292-0818, Japan

Razusa-Kametari, Kisarazu, Chiba 292-0818, Japan

Respenciosepri.co.jp, Tel:81-438-52-3975, Fax:81-438-52-3986)

REDO human cDNA sequencing project supported by Ministry of

Economy, Trade and Industry of Japan; CDNA full insert sequencing:

Research Association for Biotechnology (RAB) ic DNA library

Construction: Helix Research Institute (HRI) (supported by Japan

Key Technology Center etc.); 5'- & 3'-end one pass sequencing: RAB,

HRI, and Biotechnology Center, National Institute of Technology and

Evaluation; clone selection for full insert sequencing: HRI and

Location/Qualifiers
                        Tanigami, A., Fujiwara, T., Shibahara, T., Goto, Y., Hirao, M., Shimizu, F., Wakebe, H., Ono, T., Hishigaki, H., Watanabe, T., Ozaki, K., Sujiyama, T., Irie, F., Otsuki, T., Sato, H., Wakamateu, A., Ishii, S., Yamamoto, J., Isono, Y., Kawai-Hio, Y., Saito, K., Nishikawa, T., Kimura, K., Yamashita, H., Matsuo, K., Nakamura, Y., Sekine, M., Kikuchi, H., Kanda, K., Wagatsuma, M., Murakawa, K., Kanehori, K., Takahashi-Fujii, A., Oshima, A., Sugiyama, A., Kawakami, B., Suzuki, Y., Sugano, S., Nagahari, K., Masuho, Y., Nagai, K., and Isogai, T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           122 IleargasnValasnPheSerGlyIlealaGlyasnProValThrPheAsnGluAsnGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22 SerArgThrLeuAspAsnAsnArgArgAsnIleTrpPheAlaGluPheTrpGluAspAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            42 PheHisCysLysLeuSerArgHisAlaLeuLysLysGlySerHisIleLysLysCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           62 AsnargGluArgIleGlyGlnAspSerAlaTyrGluGluGluGlyLysValGlnPheVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GlyValSerSerLeuProThrArgMetThr --- SerGlyPheAspArgTyrPheSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3176
564
6
12
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /tissue type="cerebellum"
/clone Tib="BRACE2"
/note="cloning vector: pME18SFL3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-828-332-7 (1-584) x AK122982 (1-3176)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="BRACE2006417"
                                                                                                                                                                                                                                                            Unpublished
3 (bases 1 to 3176)
Isogai, T. and Yamamoto, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2.7e-242
3004.50
97.77%
96.74%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ROUTCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No.:
                                                                                                                                                                                                                                      TITLE
JOURNAL
REPERENCE
                                                                                                                                                                                                                                                                                                                                             TITLE
JOURNAL
     REFERENCE
                             AUTHORS
                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ota, T., Suzuki, Y., Nishikawa, T., Otsuki, T., Sugiyama, T., Irie, R., Wakamatsu, A., Hayashi, K., Sato, H., Nagai, K., Kimura, K., Makita, H., Bakamatsu, A., Otayashi, M., Nishi, T., Shibahara, T., Tanaka, T., Ishibaka, T., Tanaka, T., Ishibaka, T., Tanaka, T., Sudo, H., Wasuda, Y., Isono, Y., Nakamura, Y., Nagahari, K., Murakami, K., Yasuda, T., Iwayanagi, T., Wagatsuma, M., Shiratori, A., Sudo, H., Hosoiri, T., Kawi, Y., Kodaira, H., Kondo, H., Sugawara, M., Takahashi, M., Nanaki, T., Kaku, Y., Kodaira, H., Kanakawa, E., Omura, Y., Abe, K., Kamihara, K., Ratsuta, N., Sato, K., Hiraoka, S., Chiba, Y., Ishida, S., Ono, Y., Takhashi, T., Wanashira, H., Hiraoka, S., Chiba, Y., Ishida, S., Noo, Y., Takhashi, T., Wanashira, H., Tanase, T., Nomura, Y., Togiya, S., Komai, F., Hara, H., Tanase, T., Nomura, Y., Togiya, S., Komai, F., Hara, H., Sasaki, N., Arita, M., Imose, N., Matsunawa, H., Ichhara, T., Shiohata, N., Sano, S., Moriya, S., Momiyama, H., Ishidara, T., Shiohata, N., Sano, S., Moriya, S., Momiyama, H., Ishidaka, Y., Shiotata, N., Sano, S., Moriya, S., Momiyama, H., Satoh, N., Takami, S., Kumagai, A., Itakura, S., Fujimori, Y., Kamaka, M., Watanabe, K., Kumagai, A., Takanashima, Y., Shiqiru, F., Wakebe, H., Hishigaki, H., Watanaka, K., Fujimori, Y., Kawakami, T., Nogaki, K., Hirao, M., Kawakami, B., Yamazaki, M., Togashi, T., Nakana, M., Handaya, M., Sabaki, M., Togashi, T., Nakana, M., Hatao, M., Watanabe, M., Komatsu, T., Mizushima-Sugano, J., Shifgeta, K., Senba, T., Makagawa, K., Okumu, M., Hatana, M., Hatao, M., Kawashima, Y., Wakamura, Y., Ohori, Y., Wakagawa, K., Okumura, Y., Matanabe, M., Sabaki, M., Hatao, M., Hatao, M., Watanabe, M., Komatsu, T., Mizushima-Sugano, J., Shifgeta, K., Sabaki, M., Hatao, M., Watanabe, M., Komatsu, T., Mizushima-Sugano, J., Shifgeta, K., Shifgeta, K., Sabaki, M., Hakanami, M., Hatao, M., Wakai, K., Yamashita, R., Yada, T., Nakamura, Y., Ohara, C., Nagashi, M., Sabaki, M., Hakana, K., Makani, K., Yamashi, K., Yamashi, K., Yamashi, K., Yamashi, K., Yamashi, K., Yamash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AK122982 3176 bp mRNA linear PRI 30-JAN-2004 Homo sapiens cDNA FLJ16736 fis, clone BRACE2006417, highly similar to METABOTROPIC GLUTAMATE RECEPTOR 4 PRECURSOR.
2488 GCCTCGGTGTCCCTGGGAATGCTCTACATGCCCAAAGTCTACATCCTCTTCCACCCG 2547
                                                                                                                                                                                                                                                                                                                                                                                                                              2608 TCCAACAAGTTCACGCAGAAGGGCAACTTCCGGCCCAACGGGAGGGCCAAGTCTGAGCTC 2667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2548 GAĞCAGAACGTGCCCAAĞCGCAAĞCGCAGCCTCAAAĞCCGTCGTTACGĞCGGCCACCATĞ 2607
                                                                                                                                                                                                                                                                                                                                                                                           SerAsnLysPheThrGlnLysGlyAsnPheArgProAsnGlyGluAlaLysSerGluLeu 561
                                                                                                                                                                                        AlaSerValSerLeuGlyMetLeuTyrMetProLysValTyrIleIleLeuPheHisPro 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                 GInSerhlaaspLysLeuTyrIleGlnThrThrThrLeuThrValSerValSerLeuSer
                                                                                                                                                                                                                                                                                            GluGlnAsnValProLysArgLysArgSerLeuLysAlaValValThrAlaAlaThrMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AK122982.1 GI:34528429
oligo capping, fis (full insert sequence).
Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nat. Genet. 36 (1), 40-45 (2004)
14702039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2728 CATGCAATC 2736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         582 HisAlaile 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human cDNAs
                                2368
                                                                                                                                                                                                                                                                                               522
                                                                                    482
                                                                                                                                                                                           502
                                                                                                                                                                                                                                                                                                                                                                                                   542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AK122982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
```

2401

561

a

ઠે

8

ል ይ

중 음

ያ ያ

g

ઠે

ያ ራ ይ

8 & B

ઠે

6 8 6 8 6 8 6 8 6

Ġ

ያ ያ

8 g

ઠે

```
CysGluAsnLeuGluThrProAlaLeuAlaThrLysGlnThrTyrValThrTyrThrAsn 581
||||||||||||||||
TGCGAGAACCTTGAGGCCCCAGCGCTGGCCACAAACAGACTTACGTCACTTACACCAAC 2521
                                                                                                                                              20-JUN-2002
                                                                                                                                                                                                                                                                                                                                                           Gerecrercacearcereceaagagarereceraceageerregaceraceree 1072
                                                                                                                                                                                                                                                                                                                                                                                     SerAbniyaPheThrGlniyaGlyAbnPheArgProAbnGlyGluAlaiyaSerGluLeu
                                                                rccaacaagricacgcaagaggcaacriccggcccaacgagaggccaagrcrgagcrc
                                                                                                                                                                                                                                                                                                                                                                                                                                               GlyValSerSerGerUeuProThrArgMetThr---SerGlyPheAspArgTyrPheSer
                                                                                                                                                                                                                                                                                                                                                                                                                                         IleAspalaValTyralametGlyHisAlaLeuHisAlaMetHisArgAspLeuCysPro
                                                                                                                                              PAT
                                                                                                                                             linear
                                                                                                                                                                                                                                                                       3431
564
6
12
1
                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                nucleic
                                                                                                                                                                                M Unknown.
Unknown.
Unclassified.
5 1 (bases 1 to 3431)
S Belagaje,R.W. and Wu.S.
Metabotropic glutamate receptor 4 nucl.
AL Patent: US 6384205-A 1 07-MAY-2002;
Location/Qualifiers
1431
                                                                                                                                              DNA
                                                                                                                                                                                                                                               DNA"
                                                                                                                                             AR208972 3431 bp
Sequence 1 from patent US 6384205.
AR208972
                                                                                                                                                                                                                                 1. .3431
/organism="unknown"
/mol_type="unassigned
                                                                                                                                                                                                                                                                                                                      (1-3431)
                                                                                                                                                                 AR208972.1 GI:21510266
                                                                                                                                                                                                                                                                                                                      x AR208972
                                                                                                                                                                                                                                                                       2.99e-242
3004.50
97.77%
96.74%
6.70%
                                                                                                       HisAlaile 584
                                                                                                                                                                                                                                                                              Score:
Percent Similarity:
9
Best Local Similarity:
9
Query Match:
6
                                                                                                                   CATGCAATC
                                                                                                                                                                                                                                                                                                                     US-10-828-332-7 (1-584)
                                                                                                                                                                              Unknown
                                                                                                                                                                                                                                                                  Scores:
             2282
                                      2342
                                                                2402
                                                                                          2462
                                                                                                                                                                                                                                                                                                                                                                                                                             1193
                                                                                                                                                                                                                                                                                                                                                                                                                                                       1253
                                                                                                                    2522
                                                                                                                                                                                                                                                                                                                                               1013
502
                          522
                                                    542
                                                                             562
                                                                                                       582
                                                                                                                                                                                                                                                                                                                                   e
                                                                                                                                                                                                                                                                                                                                                                                                                62
                                                                                                                                                                                                                                                                                                                                                                                                                                          82
                                                                                                                                RESULT 9
AR208972
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                  Alignment Sc
Pred. No.:
                                                                                                                                                                                                                                   Bource
                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
JOURNAL
PEATURES
                                                                                                                                                                                                                                                     ORIGIN
          셤
                                   g
                                                ò
                                                              셤
                                                                                      셤
                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                 දු දු
                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                   임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8 8
                          ઠે
                                                                         8
                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                   1261
                                                                                                 1441
                               1741
                                                                                                                                                                                                                                                                                     1861
                                                                                                                          1501
                                                                                                                                                                              1621
                                                                                                                                                                                                         1681
                                                                                                                                                                                                                                                            1801
                                                                                                                                                                                                                                                                                                                                          1981
                                                                                                                                                                                                                                                                                                                                                                  2041
                                                                                                                                                                                                                                                                                                                                                                                             2101
                                                                                                                                                                                                                                                                                                               1921
                                                                                                                                                                                                                                                                                                                                                                                                                      2161
                                                                                                                                                                                                                                                                                                                                                                                                                                                 2221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2281
                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                    221
                                                                                                             241
                                                                                                                                       261
                                                                                                                                                                 281
                                                                                                                                                                                                                     321
                                                                                                                                                                                                                                               341
                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                  381
                                                                                                                                                                                                                                                                                                                            401
                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                               441
                                                                                                                                                                                                                                                                                                                                                                                                          461
                                                                                                                                                                                                                                                                                                                                                                                                                                                              501
      GlnLeuLeuGly1]eCygValTrpPheValValAspProSerHisSerValValAspPhe
                                                                                                                                                                                                                                                                                                                                    CAGCTGCTGGCATCTGTGTGTGTGTGTGGACCCCTCCCACTCGGTGGTGGTGCTCC
                                                                                                                                                                                                                                                                                                                                                                                                          TyrAlaIleLysThrArgGlyValProGluThrPheAsnGluAlaLysProIleGlyPhe
                                                                                                                                                                                                                                                                                                                                                                                                                 TATGCCATCAAGACACGGGGGGGGGGCCCGAGACCTTCAATGAGGCCAAAGCCCATTGGCTTC
                                             1262
                   1202
                                                                      1322
                                                                                                1382
                                                                                                                         1442
                                                                                                                                                                                                                                                                                                                                                                                             2042
                                                                                                                                                                                                                                                                                                                                                                                                          442
                                                                                                                                                                                                                                                                                                                                                                                                                       2102
                                162
                                                         182
                                                                                    202
                                                                                                             222
                                                                                                                                       242
                                                                                                                                                    1502
                                                                                                                                                                 262
                                                                                                                                                                              1562
                                                                                                                                                                                           282
                                                                                                                                                                                                       1622
                                                                                                                                                                                                                     302
                                                                                                                                                                                                                                 1682
                                                                                                                                                                                                                                               322
                                                                                                                                                                                                                                                            1742
                                                                                                                                                                                                                                                                        342
                                                                                                                                                                                                                                                                                     1802
                                                                                                                                                                                                                                                                                                  362
                                                                                                                                                                                                                                                                                                               1862
                                                                                                                                                                                                                                                                                                                            382
                                                                                                                                                                                                                                                                                                                                         1922
                                                                                                                                                                                                                                                                                                                                                      402
                                                                                                                                                                                                                                                                                                                                                                  1982
                                                                                                                                                                                                                                                                                                                                                                               422
                                                                                                                                                                                                                                                                                                                                                                                                                                    462
                                                                                                                                                                                                                                                                                                                                                                                                                                                 2162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2222
                                                                                                                                                                                                                                                                                                                                                                                                                                                              482
```

1312

101

501

2572

521

541

2632

2692

2752

```
/codon_start=1
/product="metabotropic glutamate receptor 4"
/product="metabotropic glutamate receptor 4"
/protein_id="hAB51762.1"
/db_xref="GI:1935039"
/translation="MPGKRGLGWWARLPLCLLLSLYGPWMBSSLGKPKGHPHMNSIR
IDGOITHALEGSLIFFWQALIEKDGTEWRCGSGGPPIITKPERVUGVIGASGSS
ABILDTCSRDTHALEQSLIFFWQALIEKDGTEWRCGSGGPPIITKPERVUGVIGASGSS
VSIMVANILRLFKIPQISYASTAPDLSDNSRYDFFSRVVPSDTYQAQAMVDIVRALKW
NYVSTYASEGSYGESGVBAPIQKSREDGGVCIAGSVKIPREPKAGEPDKIIRRLLETS
NARAVIIFANEDDIRRVLEAARANGTGHFFWMGSDSWGSKIAPVLHLEEVAEGAVTI
LPRENDSNRYDFPRYFESRTLIDNRRNIWFAEFWRGDSRGSKIAPVLHLEEVAEGAVTI
LPRENDSNRYDFPRYFESRTLIDNRRNIWFAEFWRGDNFHCKLSHALKKGSHVKKCTNRE
RIGQDSAYEQBGKVQFVIDAVYAMGHALHAMHRDLCPGRNGGCPRMDPVDGTQLLKYI
                                                                                                                                                                                                                                                                                                                                                                                        PRI 07-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (human)
Homo sapiens
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Bukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo.
1 (bases 1 to 3431)
Mu.S., Wright,R.A., Rockey,P.K., Burgett,S.G., Arnold,J.S.,
Groteck,P.R. Jr., Johnson,B.G., Schoepp,D.D. and Belagaje,R.M.
Group III human metabotropic glutamate receptors 4, 7 and 8:
molecular cloning, functional expression, and comparison of
Brain Res. Mol. Brain Res. 53 (1-2), 88-97 (1998)
                                                GluGlnAsnValProLygArgLygArgSerLeuLygAlvalValThrAlaAlaThrMet
                                                                                                                                                                   2573 GAGCAGAACGTGCCCCAAGCGCAAGCCCTCAAAGCCGTTACGGCGCGCCACTT
                                                                                                                                                                                                      SerAsniyaPheThrGlnLyaGlyAsnPheArgProAsnGlyGluAlaLysSerGluLeu
                                                                                                                                                                                                                     2633 TCCAACAAGTTCACGCAGAAGGGCAACTTCCGGCCCAACGAAGAGGCCAAGTCTGAGGTC
                                                                                                                                                                                                                                                       2393 ACCATGTACACCACTTGCATCGTCTGGCTGGCCTTCATCCCCCATCTTCTTTGGCACCTCG
ThrMetTyrThrThrCyglleValTrpLeuAlaPhelleProllePheBheGlyThrSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Company, Lilly
                                                                                                                                                                                                                                                                                                                                                                                     HSU92457 1 11near PRI 07.

1431 bp mRNA linear PRI 07.

192457 1 GI:1935038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 (bases 1 to 3431)
Mu,S. and Belagaje,R.M.
Direct Submission
Submitted (07-MaR-1997) mc625, Bli Lilly and (
Corporate Center, Indianapolis, IN 46285, USA
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. 3431
/organism="Homo sapiens"
/mol_type="mRNR"
/db xrefe"texon:9606"
/clone="HmGluR4-13"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="HmGluR4; Group III"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26. .2764
                                                                                                                                                                                                                                                                                                                             ||||||||||
2753 CATGCAATC 2761
                                                                                                                                                                                                                                                                                                              HisAlaIle 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9473604
                                                                                                                                                      522
                                                                                                                                                                                                         542
                                                                                                                                                                                                                                                                                                              582
 462
                                                                                                                                                                                                                                                                                                                                                             RESULT 11
HSU92457
LOCUS
DEFINITION
ACCESSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDS
                    셤
                                                                   g
                                                                                                                        셤
                                                                                                                                                                          g
                                                                                                                                                                                                                           ద
                                                                                                                                                                                                                                                                                 요
                                                  ò
                                                                                                   ઠે
                                                                                                                                               ઠે
                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                     요
 ŝ
                                 1372
                                                                                        1432
                                                                                                                                                                                                                                              1612
                                                                                                                                                                                                                                                                                                 1672
                                                                                                                                                                                                                                                                                                                                                   1732
                                                                                                                                                                                                                                                                                                                                                                                                                                                       1852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2212
                                                                                                                                          1492
                                                                                                                                                                                                                                                                                                                                                                                                       1792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2392
                                                              141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                        221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          381
                                                                                                                 161
                                                                                                                                                                   181
                                                                                                                                                                                                                     201
                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                            261
                                                                                                                                                                                                                                                                                                                                                                                                                                281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     461
            ATCCGAAACGTCAACTTCTCAGGCATCGCAGGAACCCTGTGACCTTCAATGAGAATGGA
                                                                                                                             GlySerGlyGlnGlnLeuProArgSerIleCy8SerLeuProCy8GlnProGlyGluArg
                                                                                                                                                                                                                                   GGGAGCGGGCAGCTGCCCCGCTCCATCTGCAGCCTGCCCTGCCAACCGGGTGAGCGG
                                                                                                                                                                                                                                                                      LysLysThrValLysGlyMetAlaCysCysTrpHisCysGluProCysThrGlyTyrGln
                                                                                                                                                                                                                                                                                         TyrGlnValAspArgTyrThrCysLysThrCysProTyrAspMetArgProThrGluAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                              ValargTyrAsnAspThrProlleValLysAlaSerGlyArgGluLeuSerTyrValLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LeuLeuThrLysThrAsnArg1leTyrArg1lePheGluGlnGlyLysArgSerValSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCCCACGCTTCATCAGCCCCGCCTCACAGCTGGCCATCACCTTCAGCCTCATCTCGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GlnLeuLeuGlyIleCysValTrpPheValValAspProSerHisSerValValAspPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGCTGCTGCTCGTGTGTGTTTTTTTGTGGTGGACCCCTCCCACTCGGTGGACTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GlnAspGlnArgThrLeuAspProArgPheAlaArgGlyValLeuLysCysAspIleSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGGACCAGCGGACACTCGACCCCCGCTTCGCCAGGGGTGTGCTCCAAGGGACCACAGAGTGTGACATCTCG
                                                              IleArgAsnValAsnPheSerGlyIleAlaGlyAsnProValThrPheAsnGluAsnGly
                                                                                                                 Aspala ProGly Arg TyrAspile TyrGln TyrGln Leu Arg AsnGly Ser AlaGlu Tyr
                                                                                                                                                                                                                                                                                                                                                   TACCAGGTGGACCGCTACACCTGTAAGACGTGTCCCTATGACATGCGGCCCACAGAGAAC
                                                                                                                                                                                                                                                                                                                                                                            ArgThrSerCysGlnProlleProlleValLysLeuGluTrpAspSerProTrpAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                    cechcecereccearccarcarcarcarearingageserecerecere
                                                                                                                                                                                                                                                                                                                                                                                                                               LeuProLeuPheLeuAlaValQlyIleAlaAlaThrLeuPheValValValThrPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          grecectacaaceacaceccarcercaaeeccreeecereaacreaecracere
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGCTCACCAAGACCAACCGCATCTTCGAGCAGGCAAGCGCTCGGTCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AlaProArgPhelleSerProAlaSerGlnLeuAlaIleThrPhelleLeuIleSerLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AspleuSerleulleCysleuleuGlyTyrSerMetLeuleuMetValThrCysThrVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACCTGTCGCTCATCTGCCTGCTGCTACAGCATGCTGCTCATGGTCACGTGCACCGTG
                                                                                        1373
                                     1313
                                                                                                                                        1433
                                                                                                                                                                                           1493
                                                                                                                                                                                                                                                                                                 1613
                                                                                                                                                                                                                                                                                                                                                   1673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2213
             102
                                                              122
                                                                                                                 142
                                                                                                                                                                   162
                                                                                                                                                                                                                      182
                                                                                                                                                                                                                                              1553
                                                                                                                                                                                                                                                                        202
                                                                                                                                                                                                                                                                                                                          222
                                                                                                                                                                                                                                                                                                                                                                             242
                                                                                                                                                                                                                                                                                                                                                                                                       1733
                                                                                                                                                                                                                                                                                                                                                                                                                                262
                                                                                                                                                                                                                                                                                                                                                                                                                                                       1793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2333
                                ద
                                                                                a
                                                                                                                                ሪ ይ
                                                                                                                                                                                      g
                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                       중 음
                                                                                                                                                                                                                                                                                          중 음
                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ठे हे ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ठ व ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
             ઠે
                                                        ઠે
                                                                                                             ઠે
```

```
PGSGQQLPRSICSLPCQPGBRKTVKGMPCCWHCEPCTGYQYQVDRYTCKTCPVDMRP
TEMRTCCRP1PII MLEMGSPRAVLD-FLANVOLAATLEVVITTVRYNYDTPIVKASGRE
ISYVLLAGI FLCYATFLM IABPDLGTCSLRRIFGLGGMSISSYALLTKTNRIYRIFE
GKRSVSAPRFISPASQLAITFSLISLQLLGICVWFVVDPSHSVVDPQDQRTLDPRFA
RGVLKCDISDLSLICLLGYSMLLMYTCTVALIKTRGVPETTRBARDIGDGPTTDDRFRA
IAPFIPIFFGTSQSADKLYIQTTTLTVSVSLSASVSLCMLYMPRVYIILEPTEMTYTCIVM
KRSLKAVVTAATWRGVRFYGKGNRFPNGEAKSELCENLEAPALATVGTYYTTHRIAIR
                                                                                                                                                                                                                                                                                                                                                                                                                          1432
                                                                                                                                                                                                     1072
                                                                                                                                                                                                                                                                                                                                                    1312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1792
                                                                                                                                                                                                                                                                            1192
                                                                                                                                                                                                                                                                                                                1252
RNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNDSAEYKVIGSWTDHLHLRIERMHW
                                                                                                                                                                                                                                                                                                                                                                                                          141
                                                                                                                                                                                                                                                                                                                                  101
                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                              161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      281
                                                                                                                                                                                   21
                                                                                                                                                                                                                       41
                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                              81
                                                                                                                                                                                                                      ABNARGGluhrgileGlyGlnAbpSerAlaTyrGluGluGluGlyLybyaValGlnPheVal
                                                                                                                                                                                                                                                                                                                                                                     IleArgAsnValAsnPheSerGlyIleAlaGlyAsnProValThrPheAsnGluAsnGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                        GATGCGCCTGGGCGCTATGACATCTACCAATACCAGCTGCGCAACGATTCTGCCGAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GlyValSerSerLeuProThrArgMetThr---SerGlyPheAspArgTyrPheSer
                                                                                                                                                                                                                                                                                                                                   IleAspAlaValTyrAlaMetGlyHisAlaLeuHisAlaMetHisArgAspLeuCysPro
                                                                                                                                                                                                                                                                                                                                            AspalaProGlyArgTyrAspIleTyrGlnTyrGlnLeuArgAsnGlySerAlaGluTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LysVallleGlySerTrpThrAspHisLeuHisLeuArglleGluArgMetGlnTrpPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGGTCATTGGGCTCCTGGACTGACCACCTGCACCTTAGAATAGAGCGGATGCACTGGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GlySerGlyGlnGlnLeuProArgSerIleCysSerLeuProCysGlnProGlyGluArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LysLysThrValLysGlyMetAlaCysCysTrpHisCysGluProCysThrGlyTyrGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ArgThrSerCysGlnProlleProlleValLysLeuGluTrpAspSerProTrpAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LeuProLeuPheLeuAlaValValGlyIleAlaAlaThrLeuPheValValValThrPhe
                                                                                                 3431
564
6
12
1
                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                (1-3431)
                                                                                                                                                                x HSU92457
                                                                                                2.99e-242
3004.50
97.77%
96.74%
                                                                                                                                                                 US-10-828-332-7 (1-584)
                                                                                                               Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                          Scores:
                                                                                                                                                                                                                                                                            1133
                                                                                                                                                                                                                                                                                                                1193
                                                                                                                                                                                                                                                                                                                                                     1253
                                                                                                                                                                                                                                                                                                                                                                                         1313
                                                                                                                                                                                                                                                                                                                                                                                                                            1373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1673
                                                                                                                                                                                   ო
                                                                                                                                                                                                      1013
                                                                                                                                                                                                                       22
                                                                                                                                                                                                                                         1073
                                                                                                                                                                                                                                                            42
                                                                                                                                                                                                                                                                                               62
                                                                                                                                                                                                                                                                                                                                   82
                                                                                                                                                                                                                                                                                                                                                                       102
                                                                                                                                                                                                                                                                                                                                                                                                          122
                                                                                                                                                                                                                                                                                                                                                                                                                                              142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       262
                                                                                                   ..
..
                                                                                         Alignment (
Pred. No.:
                                                                                                            Score:
                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                දි දි
                                                                                                                                                                                   8
                                                                                                                                                                                                  요
                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                      8 & B
                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                            රු පු
                                                                                                                                                                                                                                                                                                                                                                  8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                      8 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                           8 &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
```

```
1912
                                                    1972
                                                                                                    2092
                                                                                                                                                  2212
                                                                                                                                                                                                 2332
                                                                                                                                                                                                                        2392
                                                                                                                                                                                                                                                                      2512
                                                                                                                                                                                                                                                                                              2572
                                                                                                                                                                                                                                                                                                                     2632
                                                                                                                                                                                                                                                                                                                                            2692
                                                                                                                                                                                                                                                                                                                                                                                                                   PRI 30-JAN-2004
highly similar
                                                                            2032
                                                                                                                          2152
                                                                                                                                                                        2272
                                                                                                                                                                                                                                               2452
                                                                                                                                                                                                                                                                                                                                                                    2752
                                                                 341
                                         321
                                                                                        361
                                                                                                                381
                                                                                                                                       401
                                                                                                                                                             421
                                                                                                                                                                                      441
                                                                                                                                                                                                             461
                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                           501
                                                                                                                                                                                                                                                                                   521
                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                  561
                                                                                                                                                                                                                                                                                                                                                         581
                                        AspleuSerleu1leCysleuLeuGlyTyrSerMetLeuLeuMetValThrCysThrVal
                                                                                                                                                                                                            CTGCCCCTCTTCCTGGCCGTGGTGGGCATCGCTGCCACGTTGTTCGTGGTGATCACCTTT
                       GTGCGCTACAACGACACGCCCATCGTCAAGGCCTCGGGCCGTGAACTGAGCTACGTGCTG
                                                                                                                     GCCCCACGCTTCATCACCCCCCCCCCTCACAGCTGGCCATCACCCTTCAGCCTCATCTCGCTG
                                                                                                                                                                                                                                   2693 TGCGAGAACCTTGAGGCCCCAGCGCTCGCCACCAAACAGACTTACGTCACTTACACCAAC
                  uleuSerTyrValleu
                                                                                        LeuLeuThrLysThrAsnArg11eTyrArg11ePheGluGlnGlyLysArgSerValSer
                                                                                               CTGCTCACCAAGACCCAACCGCATCTTCGAGCAGGCAAGCGCTCGGTCAGT
                                                                                                               AlaProArgPhelleSerProAlaSerGlnLeuAlaIleThrPheIleLeuIleSerLeu
                                                                                                                                                                                                                                                                                                                                                         CysGluAsnLeuGluThrProAlaLeuAlaThrLysGlnThrTyrValThrTyrThrAsn
                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA linear
clone BRAMY3008937,
                                                                                                                                                                                                                                                                                                                                                                                                                   AK122836
Homo sapiens cDNA FLJ16445 fis, clone BRAMY3008
K Metabotropic glutamate receptor 4 precursor.
AK122836
                  ValArgTyrAsnAspThrProlleValLysAlaSerGlyArgGl
                                                                                                                                                                                                                                                                                                                                                                                            2761
                                                                                                                                                                                                                                                                                                                                                                                 584
                                                                                                                                                                                                                                                                                                                                                                                HisAlaile
                                                                                                                                                                                                                                                                                                                                                                                       2333
      1793
                  282
                                         302
                                                     1913
                                                                 322
                                                                             1973
                                                                                        342
                                                                                                    2033
                                                                                                                362
                                                                                                                           2093
                                                                                                                                       382
                                                                                                                                                   2153
                                                                                                                                                              402
                                                                                                                                                                          2213
                                                                                                                                                                                      422
                                                                                                                                                                                                  2273
                                                                                                                                                                                                             442
                                                                                                                                                                                                                                     462
                                                                                                                                                                                                                                                2393
                                                                                                                                                                                                                                                            482
                                                                                                                                                                                                                                                                       2453
                                                                                                                                                                                                                                                                                               2513
                                                                                                                                                                                                                                                                                                           522
                                                                                                                                                                                                                                                                                                                       2573
                                                                                                                                                                                                                                                                                                                                                          562
                                                                                                                                                                                                                                                                                                                                                                                 582
                                                                                                                                                                                                                                                                                                                                                                                            2753
                                                                                                                                                                                                                                                                                                                                                                                                             AK122836
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
      8 6 8 6 8
                                                                                                                        음 &
                                                                                                                                                                                              g
                                                                                                                                                                                                         중 점
                                                                                                                                                                                                                                 ठ व ठ
                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                          요
                                                              6 6 6 6 6
                                                                                                                                               8 8 8 8
                                                                                                                                                                                                                                                                   요
                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                   පු
                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                 ò
```

```
3.49e-242
3004.50
97.77%
96.74%
96.70%
                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                 m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           282
                                                                                                                                                                                                                           Query Match:
                                                                                                                  ..
00
                                                                                                                                                                                                                                                                                                                                                              è
                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ጵ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                              ota,T., Suzuki,Y., Nishikawa,T., Otsuki,T., Sugiyama,T., Irie,R., Wakamatsu,A., Hayashi,K., Sato,H., Nagai,K., Kimura,K., Makita,H., Sakamatsu,A., Hayashi,M., Nishi,T., Shibahara,T., Tanaka,T., Ishii,S., Yamamoto,J. Saito,K., Kawai,Y., Isono,Y., Nakamura,Y., Nagahari,S., Yamamoto,J., Saito,K., Yasuda,T., Isono,Y., Nakamura,Y., Sudahi,M., Moura,Y., Aboiri,T., Kawai,Y., Koddira,H., Kondo,H., Sugawara,M., Takahashi,M., Kanda,K., Yokoi,T., Furuya,T., Kikkawa,E., Omura,Y., Abe,K., Kamihara,K., Takahashi,T., Yamashita,H., Murakawa,K., Fujimori,K., Tanai,H., Shibahi,T., Watanabe,M., Hiraoka,S., Chiba,Y., Ishida,S., Ono,Y., Takibashi,T., Yamashita,H., Hara,H., Tanase,T., Nomura,Y., Togiya,S., Komai,F., Hara,H., Takanashi,T., Yamashita,H., Takanes,T., Nomura,Y., Togiya,S., Komai,F., Hara,H., Sabaki,M., Arita,M., Imose,N., Musashino,K., Yuuki,H., Oshima,A., Takeuchi,K., Arita,M., Imose,N., Musashino,K., Yuuki,H., Oshima,A., Tarashima,Y., Suzuki,O., Nakagawa,S., Senoh,A., Mizoguchi,H., Shiohata,Y., Shinitu,F., Markebe,H., Hishigaki,H., Watanabe,T., Suzuki,O., Nakagawa,S., Senoh,A., Mizoguchi,H., Tashiro,H., Tanajami,A., Fujiwara,T., Ono,T., Yamada,K., Fujii,Y., Ozaki,K., Hirao,M., Ohmori,Y., Kawakami,B., Yamada,K., Fujimori,Y., Kawakami,T., Matsuma,A., Takanashima,Y., Shinda,M., Fujiwara,T., Ono,T., Yamada,K., Fujimori,Y., Nakajamo,J., Shideta,K., Miraobata,A., Hikiji,T., Kobatake,N., Nakajawa,M., Sasaki,M., Takanabano,Y., Matanabe,M., Komatsu,T., Mizushima-Sugano,J., Shideta,K., Matanabe,M., Komatsu,T., Mizushima-Sugano,J., Shideta,K., Matanabe,M., Komatsu,T., Mizushima-Sugano,J., Satoh,T., Shitai,Y., Takanashi,Y., Nakamura,Y., Obama,M., Hakanashi,K., Yamashita,R., Nakamura,Y., Ohara,O., Isasaki,M., Yata,H., Watanabe,M., Komatsu,T., Mizushima-Sugano,J., Shitai,Y., Takanashi,M., Sasaki,M., Yada,T., Nakamura,Y., Ohara,O., Isasaki,K., Yamashita,R., Nakamura,Y., Ohara,O., Isasaki,K., Yamashita,R., Nakamura,Y., Ohara,O., Isasaki,K., Yamashi,K., Yada,Matanabe,M., Sasaki,M., Yada,J., Yada,J., Yamashi,K., Yada,J., Yamashi,M., Ya
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S laogai, T. and Yamamoto, J.
S laogai, T. and Yamamoto, J.
Direct Submission

S laogai, T. and Yamamoto, J.
Direct Submission

Submitted (15-JUL-2003) Takao Isogai, FLJ Project (HRI Team); 2-6-7

Kazusa-Kamatari, Kisarazu, Chiba 292-0818, Japan

(E-mail; genomica@hri.oc.jp, Tel:181-438-52-3976, Fax:81-438-52-3986)

NEDO human cDNA sequencing project supported by Ministry of

Economy, Trade and Industry of Japan; cDNA full insert sequencing:

Research Association for Biotechnology (RAB); CDNA ilbrary

Construction: Helix Research Institute (HRI) (supported by Japan

Key Technology Center etc.); 5'- & 3'-end one pass sequencing: RAB, HRI, and Biotechnology Center; National Institute of Technology and Evaluation; clone selection for full insert sequencing: HRI and RAB; annotation; HRI and RAB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Oshima, A., Takahashi-Fujii, A., Tanase, T., Imose, N., Takeuchi, K., Arita, M., Musashino, K., Yuuki, H., Hara, H., Sugiyama, T., Irie, R., Otsuki, T., Sato, H., Wakamatau, A., Ishii, S., Yamamoto, J., Isono, Y. Kawai-Hio, Y., Satio, K., Nishikawa, T., Kimura, K., Yamashita, H., Matsuo, K., Nakamura, Y., Sekine, M., Kikuchi, H., Kanda, K., Wagatsuma, M., Murakawa, K., Kanehori, K., Sugiyama, A., Kawakami, B., Suzuki, Y., Sugano, S., Nagahari, K., Masuho, Y., Nagai, K. and
                                                                                                            Bukaryoča, Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalla; Butheria; Primates; Catarrhini; Hominidae; Homo.
AK122836.1 GI:34528033
oligo capping; fis (full insert sequence)
Homo saplens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="reaxon:9606"
/clone="BRAMY3008937"
/tissue_type="amygdala"
/clone_lib="BRAMY3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NEDO human cDNA sequencing project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nat. Genet. 36 (1), 40-45 (2004)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   human cDNAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14702039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bogai, T
                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PUBMED
REFERENCE
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
```

```
1583 TTCCACTGCAAGCTGAGCCGCCACGCCTCAAGAAGGCAGCCACGTCAAGAAGTGCACC 1642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1763 GGCCGCGTGGGGCTCTGCCCGCGCATGGACCCTGTAGATGGCACCCAGCTGCTTAAGTAC 1822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1883 GATGCGCCTGGGCGCTATGACATCTACCAATACCAGCTGCGCAACGATTCTGCCGGGTAC 1942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2123 TACCAGGTGGACCGCTACACTGTAAGACGTGCCCTATGACATGCGGCCCACAGAGAAC 2182
                                                                                                                                                                                                                                                                                                                                                                                                                           1823 Arccgaaacgrcaactrcrcaggcarcgcagggaacccrgrgaccrrcaargagaargga 1882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             82 IleAspAlaValTyrAlaMetGlyHisAlaLeuHisAlaMetHisArgAspLeuCysPro 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTGCGCTACAACGACACGCCCATCGTCAAGGCCTCGGGCCGTGAACTGAGCTACGTGCTG 2362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    142 AspAlaProGlyArgTyrAspIleTyrGlnTyrGlnLeuArgAsnGlySerAlaGluTyr 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LysValileGlySerTrpThrAspHisLeuHisLeuArglleGluArgMetGlnTrpPro 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                   SerArgThrLeuAspAsnAsnArgArgAsnIleTrpPheAlaGluPheTrpGluAspAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 202 LyslygihiyalLysGlyMetAlaCysCysTrpHisCysGluProCysThrGlyTyrGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          42 PheHisCysLysLysLeuSerArgHisAlaLeuLysLysClySerHisIleLysLysCysThr
                                                                                                                                                                                                                                                                                                     GlyValSerSerSerLeuProThrArgMetThr---SerGlyPheAspArgTyrPheSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GlyArgValGlyLeuCysProArgMetAspProValAspGlyThrGlnLeuLeuLysTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GlySerGlyGlnGlnLeuProArgSerIleCysSerLeuProCysGlnProGlyGluArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       62 AsnArgGluArgIleGlyGlnAspSerAlaTyrGluGluGlyLysValGlnPheVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TyrGlnValAspArgTyrThrCysLysThrCysProTyrAspMetArgProThrGluAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LeuProLeuPheLeuAlaValQlyIleAlaAlaThrLeuPheValValThrPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2243 CTGCCCCTCTTCCTGGCCGTGGTGGCATCGCTGCCACGTTGTTCGTGGTGATCACCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ValArgTyrAsnAspThrProlleValLysAlaSerGlyArgGluLeuSerTyrValLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            122 IleArgAsnValAsnPheSerGlyIleAlaGlyAsnProValThrPheAsnGluAsnGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  242 ArgThrSerCysGlnProlleProlleValLysLeuGluTrpAspSerProTrpAlaVal
                                                                                     3850
564
6
12
1
/note="cloning vector: pMB18SFL3"
                                                                                     Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                        Gaps:
                                                                                                                                                                                                                                                         US-10-828-332-7 (1-584) x AK122836 (1-3850)
```

41

201

셤

셤 ò 요 8 ठे वि ठे

8 6 8 8

8 6 8

ò

8 6 8

6 B 6

g 8 a ઠે 임 ò

```
/ COCOLID. 164="CAA02880.1"

/ CLOST 154="CAA02880.1"

/ CLOST 164="CAA02880.1"

/ CLOST 164="MPGKRGLGWWARLPLCLLLSLYGPWMPSSLGKPKGHPHMNSIR

IDGDITLGGLPPWHGRGGSCRECGELKKEKGIHRLEAMLFALDRINNDPDLLPNITLG

ARILDTCSRDTHALEQSLTFVQALIEKDGTEVRCGSGGPPIITKPERVVGVIGASGSS

VSINWANILALEKT POISYAGATAPDLSDNSRYDFFSRYDPSPTYDAQAWYDIAACSS

VSINWANILALEKT POISYAGATIQKSREDGGVCIAQSVKI PREEKAGEPOKIIRRLETS

NAVAVITYAGSGSCYGENGVARTURNSNIW WAREPERBDNHFTCKSHHALKGSSHYKKCTNRE

RICODSA KROPOTFPNENGDAPGRYDIYQUGNDSAEYKVIGSWTDHLHLRIERWHW

PGSGOOLPRSICSLDCOPGRKKTVKGMPCCWHCEPCTGYQYQVDRYTCTCYPURRE

TENRTGCRPIPILCYATTFLAVYDLFLAVVITEVRYNDTPIVKASGRE

LSYYLLAGIFLCYATTFLAVYDLELAVVGIAATLEVVVITEVRYNDTPIVKASGRE

LSYYLLAGIFLCYATTFLANTAPDLGTCSLRIFFTGLGGNSISYAALLTKTNRIYEFE

GGKRSVSARRISASQLAITFSLISLGLGICTWRVVDDSHSVVDGDORTLDPRFA

RGVLKCDISDLSLICLLGSSMLLMYTCTTVAIRTRGVPETFNEAKPIGFTMYTTCIVW

LAFIP PFFGTSQSADKLIYTTVYSUSLSASVSCHALMYNDFRYNTRIPHEQNVPRR

LAFIP PFFGTSQSADKLIYTTVYSUSLSASVSCHALMYNDFRYNTRIPHAI"

LAFIP PFFGTSQSADKLIYTTVYSUSLSASVSCHALMYNDFRYNTRIPHAT"

LAFIP PFFGTSGSADKLIYTTVYSUSLSASVSCHALMYNDFRYNTRIPHAT "

LAFIP PFFGTSGSADKLIYTTVYSUSLSASVSCH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AspalaproGlyArgTyrAspIleTyrGlnTyrGlnLeuArgAsnGlySerAlaGluTyr 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  162 LysVallleGlySerTrpThrAspHisLeuHisLeuArgIleGluArgMetGlnTrpPro 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SerargThrLeuaspaanasnargargasnileTrpPhealaGluPheTrpGluaspasn 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1398 AICGAIGCCGIGTACGCCAIGGGCCACGCGCTGCACGCCAIGCACGTGACCTGTGICCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GlyArgValGlyLeuCysProArgMetAspProValAspGlyThrGlnLeuLeuLysTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PheHisCysLysLeuSerArgHisAlaLeuLysLysGlySerHisIleLysLysCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IleargasnvalasnPheSerGlyIlealaGlyAsnProValThrPheAsnGluAsnGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AsnArgGluArg11eG1yG1nAspSerAlaTyrG1uG1nG1nG1yLysVa1G1nPheVa1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                      /note="unnamed protein product"
                                                                                 /mol_type="unassigned DNA"
/db_xref="taxon:32644"
171. .2909
WO 9522609-A 3 24-AUG-1995;
FOUND (GB)
Location/Qualifiers
                                                                   /organism="unidentified"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (1-3884)
                                                                                                                                                         /codon start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3.53e-242
3004.50
97.77%
96.74%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      x A46196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-828-332-7 (1-584)
 Patent: WC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1578
                                                      Bource
   JOURNAL
                                                                                                                        Sign
                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8 è
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઢ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      જે
                                                                                                                                                                       2542
                                                                                                                                                                                                                                                                                                            2662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3082
                                                                                                                                                                                                                                                                                                                                                                             2722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                       361
                                                                                                                                                                                                                                                                            401
                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                              441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            561
                                                                   CysGluasnLeuGluThrProalaLeualaThrLysGlnThrTyrValThrTyrThrAsn
||||||||||||||||
TGCGAGAACCTTGAGGCCCCAGGGCTGGCCACAAACAGACTTACGTCACTTACACCAAC
   GlnLeuLeuGlyIleCysValTrpPheValValAspProSerHisSerValValAspPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCTCGGTGTCCCTGGGAATGCTCTACATGCCCCAAAGTCTACATCATCATGCTCTTCCACCCG
                                                                                                                                      LeuLeuThriygThrhanArg11eTyrArg11ePheGluGlnGlyLygArgSerValSer
                                                                                                                                                         CTGCTCACCAAGACCAACCGCATCTACCGCATCTTCGAGCAGGCAAGCGCTCGGTCAGT
                                                                                                                                                                                                                                                                                               CAGCTGCTGGGCATCTGTGTGTGTGTGTGTGGACCCCCTCCCACTCGGTGGTGGACTTC
                                                                                                                                                                                                                                                                                                                                                                                                              AspleuSerLeulleCysLeuLeuGlyTyrSerMetLeuLeuMetValThrCysThrVal
                                                                                                                                                                                                                                                                                                                                                                                                                                  GACCTGTCGCTCATCTGCCTGCTGGGCTACAGCATGCTGCTCATGGTCACGTGCACCCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tyrala1leLysThrArgGlyValProGluThrPheAsnGluAlaLysPro1leGlyPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ThrMetTyrThrThrCysIleValTrpLeuAlaPheIleProIlePhePheGlyThrSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    accargracaccarrigearcescreectreecercecarcraterrigecaccree
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GInSerAlaAspLysLeuTyrIleGlnThrThrThrLeuThrValSerValSerLeuSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AlaSerValSerLeuGlyMetLeuTyrMetProLysValTyrIleIleLeuPheHisPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 unidentified
unidentified
unclassified.
1 (bases 1 to 3884)
Makoff, A.J.
HUMAN GLUTAMATE RECEPTOR PROTEINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A46196 3884 bp
3884 bp
Aeduence 3 from Patent W09522609.
A46196.1 GI:2300444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATGCAATC 3211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HisAlaile 584
                                   2363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3203
                                                                      322
                                                                                                      2423
                                                                                                                                       342
                                                                                                                                                                       2483
                                                                                                                                                                                                           362
                                                                                                                                                                                                                                          2543
                                                                                                                                                                                                                                                                              382
                                                                                                                                                                                                                                                                                                             2603
                                                                                                                                                                                                                                                                                                                                             402
                                                                                                                                                                                                                                                                                                                                                                               2663
                                                                                                                                                                                                                                                                                                                                                                                                                422
                                                                                                                                                                                                                                                                                                                                                                                                                                                2723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 13
```

Db 2718 GAGCAGAACGTGCCCAAGCGCAGCCTCAAAGCCGTTACGGCGGCCACCATG 2777 Qy 542 SerAsnLysPheThrGlnLysGlyAsnPheArgProAsnGlyGluAlaLysSerGluLeu 561	RESULT 14 AR270511 AR270511 AR270511 AR270511 AR270511 AR270511 AR270511 AR270511 VERSION AR270511 KEYWORDS SOURCE Unknown.	ORGANISM Unknown. Unclassified. REFERENCE 1 (bases 1 to 3884) AUTHORS Au-Young, J. and Seilhamer, J.J. TITLE Composition for the detection of signaling pathway gene expression JOURNAL Patent: US 6500938+A 1074 J.DEC-2002; FEATURES 1. S860938+A 1074 J.DEC-2002; SOURCE 1. A. 3884	th: 3 thes: 5 srvative: 6	Best Local Similarity: 96.74* Mismatches: 12 Query Match: 96.70* Indels: 1 DB: Caps: 1 US-10-828-332-7 (1-584) x AR270511 (1-3884) Qy 3 GlyValSerSerSerLeuProThrArgMetThrSerGlyPheAspArgTyrPheSer 21		42 PheHisCysLysLeuSerArgHisAlaLeuLysLysGlySerHisIleLysLysCysThr	Db 1338 AACCGTGAATTGGGCAGGATCAGCTTATGAGCAGGGGAAGGTGCAGTTTGTG 1397 Qy 82 IleAspAlaValTyrAlaMetGlyHisAlaLeuHisAlaMetHisArgAspLeuCySPro 101 Qh 1300 AACCGTGACCGAATTGGGCAGGCAGCAGCAGGGGAAGGTGCAGTTTGTG 1397	102 GlyargValGlyLeuCysProArgMetAspProValAspGlyThrGlnLeuLeuLysTyr 102 H		142 AspAlaProGlyArgTyrAspIleTyrGlnTyrGlnLeuArgAsnGlySerAlaGluTyr
	242 ArgthrSerCysGlnProlleProlleValLysLeuGluTrpAspSerProTrpAlaVal 261	282 ValArgTyrAsnAspThrProlleValLysAlaSerGlyArgGluLeuSerTyrValLeu 301	322 GlyThrCysSerLeuArgArgIlePheLeuGlyMetSerIleSerTyrAlaAla 341 [11	AlaProArgPheIleSerProAlaSerGlnLeuAlaIleThrPheIleLeuIleSerLeu	2298 CAGCTGCTGGGCATCTGTGGTTTGTGGTGGACCCCTCCCACTCGGTGGACTTC 2357 402 GlnaspGlnArgThrLeuAspProArgPheAlaArgGlyValLeuLysCysAspIleSer 421	422 AspleuserLeulleCysLeuLeuGlyTyrSerMetLeuLeuMetValThrCysThrVal 441 [1]	IAIGCCAICAMGACACGCGGGGGGGGGGGGGGGGGGGGGG		502 AlaSerValSerLeuGlyMetLeuTyrMetProLygValTyrIleIleLeuPheHigPro 521 	522 GluGlnAsnValProiysArgLysArgSerLeuLysAlaValValThrAlaAlaThrMet 541

64 15 I TIC	SOURCE Unknown. ORGANISM Unknown. Unclassified. Unclassified. Unclassified. Unclassified. Unclassified. Unclassified. Unclassified. Unclassified. AUTHORS Chaudhari,v. and Roper,S.D. TITLE Taste receptor for unami (monosodium glutamate) taste JOURNAL Patent: US 6608176-A 14 19-AUG-2003; FEATURES 1. 3884 /organism="unknown" /mol_type="genomic DNA"	ignment Scor ed. No.: ore: rcent Simila st Local Sim ery Match: :	0	Db 1338 AACCGTGAAGCAAATTGAGCTAACTTATGAGCAGGAAGGTGCAAGTTTTTTG 1397 Qy 82 IIEASDAIAVAITTATIAMEEGIYHISAJALEHHISAJAMEEHISAAGAGGTGCAGGTTTTTTTTTTTTTTTTTTTTTTTTTTT
	CTGCCCCTCTTCCTGGCCGTGGTGGGCATCGCTGCTCGTTGTTCGTGGTGATCACCTTT ValArgTyrAsnAspThrProlleValLysAlaSerGlyArgGluLeuSerTyrValLeu	2118 GGCACCTGCTGCTGCGCCGAATCTTCCTGGACTAGGGATCAGCTATGCAGCC 2177 342 LeuLeuThrLygThrAsnArglleTyrArgllePheGluGlnGlyLygArgSerValSer 361 2178 CTGCTCACCAACCGACCGATCTTCGAGCAGCAGCGCTCGGTCAGT 2237 362 AlaProArgPhelleSerProAlaSerGlnLeuAlalleThrPhelleLeulleSerLeu 381 [2298 CAGCTGCTGGGCATCTGTGTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTT	Three control of the

ihis Page Blank (uspto)

```
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
```

겉	
mode	
8	
using	
uBj	
ch,	
search	
w	
eir	
rotein	
Ď,	
eir	
rotein	
ō,	
δ	

June 17, 2005, 17:59:49; Search time 178 Seconds (without alignments) 1680.080 Million cell updates/sec Run on:

US-10-828-332-7 3107 1 MPGVSSSLPTRMTSGFDRYF......LETPALATKQTYVTYTNHAI 584 Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

1612378 segs, 51207,9187 residues Searched:

Total number of hits satisfying chosen parameters:

1612378

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

UniProt_03:*
1: uniprot_sprot:*
2: uniprot_trembl:* **Database** :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	P31423 rattus norv	Q14833 homo sapien	Q62916 rattus norv	Q6zmq2 homo sapien	O68ef4 mus musculu	O00222 homo sapien	Q6b964 mus musculu	P70579 rattus norv	P47743 mus musculu	Q14831 homo sapien	Q68ed2 mus musculu	P35400 rattus norv	рошо	homo	homo		Q76mr0 poephila gu	O15303 homo sapien	Q863i4 oryctolagus	P35349 rattus norv	_		Q9pwel ictalurus p						droso	~	
SUMMARIES	QI	MGR4 RAT	MGR4 HUMAN	Q629 <u>1</u> 6	Q6ZMQ2	Q68EF4	MGR8 HUMAN	Q6B964	MGR8 RAT	MGR8 MOUSE	MGR7 HUMAN	Q68ED2	MGR7_RAT	QBNFS2	Q8NPS3	Q8NFS4	ODM46D	Q76MR0	MGR6 HUMAN	Q863 <u>T</u> 4	MGR6_RAT	Q8CFQ7	Q76E43	Q9PWE1	QBNHA9	MGR_DROME	Q7KQS9	Q70GQ8	Q9V4U3	Q9V4U4	Q75QW7	Q6S738
	08	-	Н	~	~	~	٦	7	ч		-4	~	н	N	7	N	N	~	Н	~	-	7	~	~	~	-	~	~	~	N	7	0
	* Query Match Length	912	912	983	196	832	908	908	908	908	915	915	915	906			551					546		977						-	933	843
•	A Query Match	98.2	96.7	87.6	87.5	82.0	76.5	76.5	76.3	75.2	71.4	71.3	71.1	70.5	70.5	70.5	68.0	9.99	66.1	65.8	65.2	63.3	59.7	58.4	41.3	39.9	39.4	39.4	39.4	39.4	38.0	37.9
	Score	3050.5	3004.5	2720.5	2719	2546.5	2377	2377	2371	2336	2219	2214	2210	2189	2189	2189	2111.5	2069.5	2052.5	2044	2025	1967.5	1855	1813	1284.5	1240.5	1223.5	1223.5	1223.5	1223.5	1181	1179
	Result No.		~	m	4	S	9	7	80	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27	28	29	30	31

P31421 rattus norv	Q14832 nomo sapien Q9qy82 mus musculu	Q86yg6 homo sapien	P31422 rattus norv	Q14416 homo sapien	Q8tbh9 homo sapien	Q75qw6 apis mellif	Q13255 homo sapien	P23385 rattus norv	Q98uc6 gallus gall	-		Q98uc5 gallus gall	
MGR2_RAT	MGR3 HUMAN	Q86 <u>YG</u> 6	MGR3 RAT	MGR2 HUMAN	Q8TB <u>H</u> 9	Q75QW6	MGR1 HUMAN	MGR1_RAT	Q98UC6	Q6J164	MGRS HUMAN	Q98UCS	
н.		N	ч	н	N	N	н	~	N	~	-	7	
872	877	879	879	872	877	1040	1194	1199	1156	942	1212	1188	
37.7	37.2	37.2	37.1	37.0	37.0	37.0	36.3	36.1	36.0	36.0	36.0	36.0	
71.5	1155.5	155.5	1152.5	1150.5	1148.5	1148.5	1129	1122	1118.5	1118	1118	1117	•
::		_	•										

ALIGNMENTS

```
422
                                                                                       482
                                                                                                                        810
                                                                                                                                                              542
                                                                                                                                                                                                 870
                                                                                                                                                                                                                                                                                                          014833;
                                                                                                                                                                                                                                                        RESULT 2
                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                               g
                                          g
                                                                                      8
                                                                                                                    유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RTSCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                               R RGD; 2745; Grad.

R InterPro; IPR001828; ANF receptor.
InterPro; IPR001828; Muglu_receptor.
InterPro; IPR000137; GDCR_Mgr.
InterPro; IPR000137; Muglu_receptor.
InterPro; IPR0001786; Muglu_receptor.
R Pfam; PF00003; 7Lm_3; 1.
R PROSTIE; PR00248; GPCRMGR.
R PROSTIE; PR00979; G PROTEIN_RECEP_F3_1; 1.
R PROSTIE; PS00980; G_PROTEIN_RECEP_F3_2; 1.
R PROSTIE; PS00980; G_PROTEIN_RECEP_F3_3; 1.
R PROSTIE; PS00259; GPROTEIN_RECEP_F3_3; 1.
R PROSTIE; PS00259; GPROTEIN_RECEP_F3_3; 1.
R PROSTIE; PS00259; GPROTEIN_RECEP_F3_4; 1.
R G-protein_coupled_receptor; Glycoprotein; Multigene family; Signal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       330 GAVTILPKRMSVRGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RISCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFRQGKRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GVSSSLPTRMT-SGFDRYFSSRTLDNWRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         450 IRNVNPSGIAGNPVTFNENGDAPGRYDIÝQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                              Potential.
Metabotropic glutamate receptor 4.
Extracellular (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . .) (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 3050.5; DB 1; Length 912; Pred. No. 2.9e-240; 2; Mismatches 5; Indels 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Extracellular (Potential).
7 (Potential).
Cytoplasmic (Potential).
N-linked (GIGNAC...) (Pote Q-> R (in Ref. 2)...)
                                                                                                                                                                                                                                                                                                                                                                                                    Extracellular (Potential).

Extracellular (Potential).

Cytoplasmic (Potential).

A (Potential).

Extracellular (Potential).

S (Potential).

Cytoplasmic (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           336430EF19B4B577 CRC64;

    (Potential).
    Cytoplasmic (Potential).

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           101818 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98.2%;
98.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 98.6°
Marches 575; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           912
912
98
454
484
569
                 PIR; JH0563; URUSCH.
HSSP; P23385; 1EWK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          124 1
912 AA;
                                                                                                                                                                                                                                                                                              Transmembrane
                                                                                                                                                                                                                                                                                                                                                DOMAIN
TRANSMEM
DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
TRANSMEM
DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
CARBOHYD
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CARBOHYD
                                                                                                                                                                                                                                                                                                              SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                 CHAIN
DOR NOOR STATE STA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
```

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                    869
481
                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=214623; PubMed=11525421;
Ohtsuki T., Toru M., Arinami T.;
Ohtsuki T., Toru M., Arinami T.;
"Mutation screening of the metabotropic glutamate receptor mgluR4 (GRM4) gene in patients with schizophrenia.";
Psychiatr. Genet. 11:79-83(2001).
-!- FUNCTION: Receptor for glutamate. The activity of this receptor is mediated by a G-protein that inhibits adenylate cyclase activity.
-!- SUBUNIT: Interacts with PRKCABP (By similarity).
-!- SUBCELULAR LOCATION: Integral membrane protein.
-! TISSUE SPECIFICITY: Strongly expressed in the cerebellum.
Expressed at low levels in hippocampus, hypothalamus and thalamus.
No expression detected in liver.
-!- SIMILARITY: Belongs to the G-protein coupled receptor 3 family.
                                                                                                                                                                                                       750 DLSLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                                                                                                     QSADKLY1QTTTLTVSVSLSASVSLGMLYMPKVY11LFHPEQNVPKRKRSLKAVVTAATM
    DLSLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=98141892; PubMed=9473604; DOI=10.1016/S0169-128X(97)00277-5; Wu S., Wright R.A., Rockey P.K., Burgett S.G., Arnold J.S., Rockey P.K., Dropett S.G., Arnold J.S., Grotteck P.R. Jr., Johnson B.G., Schoepp D.D., Belagaje R.M.; Group III human metabotropic glutamate receptors 4, 7 and 8: molecular cloning, functional expression, and comparison of pharmacological properties in RGT cells."; and comparison of prain Res. Mol. Brain Res. 53:88-97(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE=Brain;
MEDLINE=96346635; PubMed=8738157; DOI=10.1016/0169-328X(95)00321-I;
Makoff A., Lelchuk R., Oxer M., Harrington K., Emson P.;
"Molecular characterization and localization of human metabotropic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDIINE=95342351; PubMed=7617140; DOI=10.1016/0028-3908(94)00149-M; Plor P.J., Lukic S., Rueegg D., Leonhardt T., Knoepfel T., Kuhn R.; "Molecular cloning, functional expression and pharmacological characterization of the human metabotropic glutamate receptor type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                       584
                                                                                                                                                                                                                                                                                                                                                                                                  912
                                                                                                                                                                                                                                                                                                                                                                 SNKFTQKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI
                                                                                                                                                                                                                                                                                                                       SNKFTOKGNFRPNGEAKSELCENLETPALATKOTYVTYTNHAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-NOV-1997 (Rel. 35, Last sequence update)
25-GCT-2004 (Rel. 45, Last annotation update)
Metabotropic glutamate receptor 4 precursor (mgluR4)
Name=GRM4; Synonyms=GPRC1D, MGLUR4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     912 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Brain Res. Mol. Brain Res. 37:239-248(1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Neuropharmacology 34:149-155(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-NOV-1997 (Rel. 35, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         glutamate receptor type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VARIANT ILE-797.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rissuE=Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HUMAN
```

481

541

m

```
810 QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKYYIILFHPEQNVPKRKRSLKAVVTAATM 869
                                                                                                                         APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS 421
                                                                                                                                                           690 APRFISPASQLAITFSLISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS 749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GO; GO:0016020; C:membrane; IRA.
GO; GO:0016020; C:membrane; IRA.
GO; GO:000067; F:metabotropic glutamate, GABA-B-like recepto. . .; IEA.
GO; GO:0004072; F:receptor activity; IEA.
InterPro; IPR001828; ANF receptor.
InterPro; IPR001037; GPCR Mgr.
InterPro; IPR001062; Mcglu_receptor.
InterPro; IPR001063; Mcglu_receptor.
InterPro; IPR011500; NCD3G_GPCR.
Pfam; PF01094; ANF receptor; 1.
Pfam; PF01094; ANF receptor; 1.
                                                                             630 LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLIKTNRIYRIFEQGKRSVS
                                                      LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVS
                                                                                                                                                                                                                                                                  QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM
                                                                                                                                                                                            | DESLICLIGYSMLIMVICTVYAIKTRGVPETFNEAKPIGFTMYTTCIVMLAFIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GVSSSLPTRMT-SGPDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 2; Length 983;
                                                                                                                                                                                                                                                                                                                                   SNKFTOKGNFRPNGBAKSELCENLETPALATKQTYVTYTNHAI 584
                                                                                                                                                                                                                                                                                                                                                       870 SNKFTQKGNFRPNGEAKSELCENLEAPALATKQTYVTYTNHAI 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     O'Hara P.J.;
Submitted (JAN-1996) to the EMBL/GenBank/DDBJ databases.
EMBL; 14731; AAA88788.1; -.
HSSP; P23385; LEWK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            983 AA; 109276 MW; 072F0D8B3A840A80 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98.5%; Pred. No. 2.9e-213; ive 2; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                87.6%; Score 2720.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE, PS00979; G_PROTEIN_RECEP_F3_1; 1. PROSITE; PS00980; G_PROTEIN_RECEP_F3_2; 1. PROSITE; PS00981; G_PROTEIN_RECEP_F3_3; 1. PROSITE; PS50259; G_PROTEIN_RECEP_F3_4; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last seq
01-JUN-2003 (TrEMBLrel. 24, Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Metabotropic glutamate receptor 4b.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRINTS; PR00248; GPCRMGR.
PRINTS; PR01054; MTABOTROPC4R.
PRINTS; PR00593; MTABOTROPICR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 511; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=10116;
                     570
                                                        302
                                                                                                                          362
                                                                                                                                                                                                                                750
                                                                                                                                                                                                                                                                  482
                                                                                                                                                                                                                                                                                                                                       542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         62
                                                                                                                                                                                               422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q62916
Q62916;
                                                                                                                                                                                                                                                                                                                                                                                                                                              062916
                     8 8
                                                                               셤
                                                                                                                ð
                                                                                                                                                       ద
                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                 요
                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
   loved. Usage by and for commercial
(See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              330 GAVIILPKRMSVRGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHVKKCT 389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         242 RTSCQPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          510 GSGQQLPRSICSLPCQPGBRKKTVKGMPCCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 390 NRERIGODSAYEOEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (Potential).
(Potential).
(Potential).
                                                                                                                                                      GO; GO:005887; C:integral to plasma membrane; TAS.
GO; GO:0008067; F:metabotropic glutamate, GABA-B-like recepto.
GO; GO:0007194; P:negative regulation of adenylate cyclase ac.
GO; GO:0007268; P:synaptic transmission; TAS.
InterPro; IPR001329; ANF receptor.
InterPro; IPR000137; GPCR Mgr.
InterPro; IPR000162; Mtglu_receptor.
InterPro; IPR0001786; Mtglu_receptor.
Pfam; PF001094; ANF_receptor4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ٦,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 3004.5; DB 1; Length 912; Pred. No. 1.7e-236;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                receptor
                                                                                                                                                                                                                                                                                           Pram; PF01094; ANP_receptor; 1.

PRINTS; PR00248; GPCRMGR.
PROSITE; PS00979; G PROTEIN_RECEP_F3_1; 1.

PROSITE; PS00981; G_PROTEIN_RECEP_F3_2; 1.

PROSITE; PS00981; G_PROTEIN_RECEP_F3_3; 1.

PROSITE; PS50259; G_PROTEIN_RECEP_F3_3; 1.

PROSITE; PS50259; G_PROTEIN_RECEP_F3_3; 1.

POLYMOTPHIGM: Signal; Transmembrane.

SIGNAL.

SIGNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Extracellular (Potential).
1 (Potential).
2 (Potential).
2 (Potential).
Extracellular (Potential).
3 (Potential).
Cytoplasmic (Potential).
4 (Potential).
5 (Potential).
5 (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4A2F36E63A2EAF5A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Extracellular (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cytoplasmic (Potential). 6 (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Potential.
Metabotropic glutamate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cytoplasmic (Potential)
N-linked (GlCNAc. . .)
N-linked (GlCNAc. . .)
N-linked (GlCNAc. . .)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-linked (GlcNAc. ..)
N-linked (GlcNAc. ..)
N-linked (GlcNAc. ..)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FTIG=VAR 012992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6; Mismatches
modified and this statement is not removed. entities requires a license agreement (See lor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     912 AA; 101867 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96.7%;
                                                                      EMBL; X80818; CAA56784.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 96.7
Matches 564; Conservative
                                                                                                                          Genew; HGNC:4596; GRM4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               610
624
645
645
675
675
772
772
772
772
772
772
808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHAIN
DOMAIN
TRANSMEM
DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TRANSMEM
DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
```

61

셤 ઠે 8 ò g δ 요

```
Best Local Similarity
                                                                                             62
                                                                                                                                                                                                                           122
                                                                                                                                                                                                                                                                                                                                                       182
                                                                                                                                                                                                                                                                                                                                                                                                                   394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q68EF4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             068EF4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 5
Q68EF4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             THE STATE OF THE S
                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 요
                                                                                             ò
                                                                                                                                               셤
                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EQUENCE FROM N.A.

TISSUE-Brain;

Kawakami B., Sugiyama A., Takemoto M., Sugiyama T., Irie R.,

Kawakami B., Sugiyama A., Takemoto M., Sugiyama T., Irie R.,

A Kawakami B., Sugiyama A., Takemoto M., Sugiyama T., Ishi S., Yamamoto J.,

Botuki T., Sato H., Ota T., Wakamita M., Kikuchi H., Kanda K.,

A Magatsuma M., Murakawa K., Kanehori K., Takethi H., Kanda K.,

A Magatsuma M., Murakawa K., Kanehori K., Takikuchi H., Kanda K.,

A Magatsuma M., Murakawa K., Kanehori K., Takikuchi H., Kanda K.,

B Magatsuma M., Murakawa K., Masuho Y., Nagai K., Isogai T.;

Submitted (WAR-2004) to the EMBL/GenBank/DDBJ databases.

B Submitted (WAR-2004) to the EMBL/GenBank/DDBJ databases.

B Submitted (WAR-2004) to the EMBL/GenBank/DDBJ databases.

CO; GO:0016020; C::membrans! IEA.

GO; GO:000867; F:metabotropic glutamate, GABA-B-like recepto. .; IEA.

GO; GO:000817; F:metabotropic glutamate, GABA-B-like recepto. .; IEA.

R GO; GO:0001622; Mcglu_receptor.

InterPro; IPR001786; Mcglu_receptor.

InterPro; IPR001786; Mcglu_receptor.

InterPro; IPR00137; Thm 3: 1.

R Pfam; PP00003; 7fm 3: 1.

R Pfam; PP00003; 7fm 3: 1.
                                                                                                                              509
                                                                                                                                                                                                                                                         569
                                                                                                                                                                                                                                                                                                                                                          689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             809
                                                               181
                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                  GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                    LAGI PLCYATTFLMI AEPDLGTCSLRRI FLGLGMSI SYAALLIKTNRI YRI FEQGKRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DLSLICLLGYSMLLMYTCTVYAIKTRGVPETFNBAKPIGFTMYTTCIVWLAFIPIFFETFS
NRERIGQDSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                           IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP
                                                                                         GSGOOLPRSICSLPCOPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                         RISCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DISLICLIGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            05-JŪL-2004 (TrEMBLrel. 27, Created)
05-JŪL-2004 (TrEMBLrel. 27, Last sequence update)
05-JŪL-2004 (TrEMBLrel. 27, Last annotation update)
05-JŪL-2004 (TrEMBLrel. 27, Last annotation update)
Hypothetical protein FLJ16766.
Evaluatyota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  87.5%; Score 2719; DB 2; Length 796;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   88492 MW; FAE466D1D45D3829 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFH 520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRINTS; PR00248; GPCRMGR.
PRINTS; PR01054; MTABOTROPC4R.
PRINTS; PR00593; MTABOTROPICR.
PROSITE; PS00980; GPROTEIN RECEP F3 2; 1.
PROSITE; PS00981; GPROTEIN RECEP F3 3; 1.
PROSITE; PS50259; GPROTEIN RECEP F3 4; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      796 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Receptor.
SEQUENCE
                                                               122
                                                                                                                              450
                                                                                                                                                                                             182
                                                                                                                                                                                                                                                             510
                                                                                                                                                                                                                                                                                                                         242
                                                                                                                                                                                                                                                                                                                                                                                     570
                                                                                                                                                                                                                                                                                                                                                                                                                                                       302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q6ZMQ2
                                                                                                                       8
                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SO ORRESPONDE SERVICE OF SERVICE 
                                                        ઠે
                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
```

```
REGUENCE FROM N.A.

REGUENCE FROM N.A.

REGUENCE FROM N.A.

REALISTAIN-CSTRAIL (5) TISSUE-Mouse;

REALIN-CSTRAIL (5) TISSUE-Mouse;

REALIN-CSTRAIL (5) TISSUE-Mouse L.H., Derge J.G.,

REALIN-CSTRAIL (5) T. Feingold E.A., Grouse L.H., Derge J.G.,

RA Altachard S.F., Zeeberg B., Buerow K.H., Schaefer C.F., Bhat N.K.,

RA Altschul S.F., Zeeberg B., Buerow K.H., Schaefer C.F., Bhat N.K.,

RA Altschul S.F., Zeeberg B., Buerow K.H., Schaefer C.F., Bhat N.K.,

RA Altschul S.F., Zeeberg B., Borelow K.H., Schaefer C.F., Bhat N.K.,

RA Altschul S.F., Loquellano N.A., Parmer A.A., Rubin G.M., Hong L.,

RA Brownstein M.J., Ugdin T.B., Toehiyuki S., Carninci P., Prange C.,

RA Brownstein M.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

RA S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,

RA Halton M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

RA Richards X.W., Touchman J.W., Green E.D., Dickson M.C.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

RA Jones S.J., Marra M.A.;

RA Jones S.J., Marra M.A.;

RA Jones S.J., Marra M.A.;

REGUENCE T. M. Schallus D.E., Schnerch A., Schein J.E.,
                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           633
                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                 393
                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                 453
                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GSGQQLPRSICSLPCQPGERKKTVKGMPCCWHCEPCTGYQYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RTSCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NRERIGODSAYEQEGKVOFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                           IPNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP
                                                                                                                                                                                                                                                                                                                                            GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DISTICTLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-OCT-2004 (TrEMBLrel. 28, Created)
25-OCT-2004 (TrEMBLrel. 28, Last sequence update)
25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
Hypothetical protein.
Hypothetical protein.
Buka musculus (Wouse).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
                                                        ö
                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SNKFTOKGNFRPNGEAKSELCENLETPALATKOTYVTYTNHAI 584
97.9%; Pred. No. 3e-213;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                     Matches 512; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
```

```
NCBI_TaxID=9606;
    389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NRERIGODSAYEQEGKVOFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSABYKVIGSWTDHLHLRIERMQWP 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   570 RTSCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL 629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
"Generation and initial analysis of more than 15,000 full-length human and mouse CDNA sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     330 GAVTILPKRISVRGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GSGQQLPRSICSLPCQPGERKTTVKGMACCWHCEPCTGYQYQVDRYTCRYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      390 NRERIGODSAYEQEGKYQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   750 DLSLICLLGYGMLAVTCTVYAIKTRGVPETFNBAKPIGFTMYTTCIVMLAFIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   510 GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDWRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RTSCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DISLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            82.0%; Score 2546.5; DB 2; Length 832; 95.2%; Pred No. 4e-199;
                                                                                                                              A Director Mack Project.

Submitted (AUG-2004) to the EMBL/GenBank/DDBJ databases.

R InterPro; IPR001828; ANF receptor.

InterPro; IPR001829; GPGR_MST.

InterPro; IPR001829; MST.

InterPro; IPR001829; MST.

InterPro; IPR00186; MSJL_receptor.

R Pfam; PF01094; ANF_receptor; 1.

R Pfam; PF01094; ANF_receptor; 1.

R PRNINTS; PR00184; MTABOTROPC4R.

R PRINTS; PR00189; GPCRWGR.

R PROSITE; PS00999; GPROTEIN RECEP F3_1; 1.

R PROSITE; PS00981; GPROTEIN RECEP F3_2; 1.

R PROSITE; PS00981; GPROTEIN RECEP F3_2; 1.

R PROSITE; PS00981; GPROTEIN RECEP F3_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   l protein.
832 AA; 92832 MW; 2B90570F77861FB1 CRC64;
                                          Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           810 QSADKVTSEALPVEFSPPLLA 830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QSADKLYIQTTTLTVSVSLSA 502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MGRB HUMAN STANDARD; PR
000222; 015493; 095945; 095946;
01-NOV-1997 (Rel. 35, Created)
                                                                               SEQUENCE FROM N.A.
STRAIN=C57BL/6; TISSUE=Mouse;
Director MGC Project;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 95.2
Matches 477; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hypothetical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 6
MGR8 HUMAN
ID MGR8 HI
AC 000222;
DT 01-NOV-
RT REL REL ER RE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
```

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=9924274; PubMed=10216218; DOI=10.1016/S0169-328X(99)00050-9; Malherbe P., Kratzeisen C., Lundstrom K., Richards J.G., Faull R.L.M., Mutel V.; Michards J.G., Faull R.L.M., Coloning and functional expression of alternative spliced variants of the human metabotropic glutamate receptor 8."; Brain Res. Mol. Brain Res. 67:201-210(1999).

-I-FUNCTION: Receptor for glutamate. The activity of this receptor is mediated by a G-protein that inhibits adenylate cyclase activity.

-I-SUBGLIGHTAR LOCATION: Integral membrane protein.

-I-ALTERNATIVE PRODUCTS:

-I-BVALELICHERNATIVE PRODUCTS:

-I-BVALELICHERNATIVE PRODUCTS:

-I-BVALELICHERNATIVE PRODUCTS:
                                                                                                                                                                                                                                                                                                                             [1] SEQUENCE FROM N.A. (ISOFORM A). MEDILINE-9141892; PubMed-9473604; DOI=10.1016/S0169-328X(97)00277-5; MEDLINE-99141892; PubMed-9473604; DOI=10.1016/S0169-328X(97)00277-5; Wu S., Wright R.A., Rockey P.K., Burgett S.G., Arnold J.S., Rosteck P.R. Jr., Johnson B.G., Schoepp D.D., Belagaje R.M.; "Group III human metabotropic glutamatic receptors 4, 7 and 8: molecular cloning, functional expression, and comparison of pharmacological properties in RGT cells."; Brain Res. Mol. Brain Res. 53:88-97(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIMILARITY: Belongs to the G-protein coupled receptor 3 family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.-0.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MIN, 601116; --
GO: 60:0005897; C:integral to plasma membrane; TAS.
GO: GO:0005867; F:metabotropic glutamate, GABA-B-like recepto.
GO: GO:0007194; F:metabotropic glutamate, GABA-B-like recepto.
GO: GO:0007601; F:visual perception; TAS.
InterPro; IPR001828; ANP receptor.
InterPro; IPR001828; ANP receptor.
InterPro; IPR000182; Mtglu_receptor.
InterPro; IPR000141; Mtglu_receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A. (ISOFORM A).
MEDLINE=97446143; PubMed=9299241; DOI=10.1006/geno.1997.4842; Scherer S.W., Soder S., Duvoisin R.M., Huizenga J.J., Tsui L. "The human metabotropic glutamate receptor 8 (GRM8) gene: a disproportionately! large gene located at 7q31.3-q32.1."; Genomics 44:232-236(1997).
                                                                                                                                                        Homo sapiens (Human).
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Butelé
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Name=A; Synonyms=mGluR8a;
IsoId=000222-1; Sequence=Displayed;
Name=B; Synonyms=mGluR8b;
IsoId=000222-2; Sequence=VSP_002032;
Name=C; Synonyms=mGluR8c;
IsoId=000222-3; Sequence=VSP_002033, VSP_002034;
16-OCT-2001 (Rel. 40, Last sequence update)
S-OCT-2004 (Rel. 45, Last annotation update)
Metabortopic glutamate receptor 8 precursor (mGluR8)
Name=GRM8; Synonymm=GPRC1H, MGLUR8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. (ISOFORMS B AND C).
TISSUE=Fetal brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL, AJ236921; CAB36968.1; -. EMBL, AJ236925; CAB3696.1; -. HSSP; P23385; IEWT. Genew; HGNC:4600; GRM8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 receptor; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; U92459; AAB51764.1; -. EMBL; U95025; AAB72040.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00003; 7tm 3; 1.
Pfam; PF01094; ANF recep
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS; PR00248; GPCRMGR
```

```
625
                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                      802
                                                                                                                                                                                                                                                                                                                                                                                                                                    865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        385
                                                                                                                                                                                      421
                                                                                                                                                                                                                                      745
                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         62 NRERIGQDSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY 121
               APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS
                                                                                                                                                                                                                                                                                         DISLICLIGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                                    QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM
                                                                                           LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLIKTNRIYRIFEQGKRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. MCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The second of the mouse metaborropic glutamate receptor 8A.";

SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SEQUENCE FROM S.R.;

duo J., Ikeda S.R.;

duo J., Ikeda S.R.;

"Cloning of the mouse metabotropic glutamate receptor 8A.";

Submitted (JUL-2004) to the EMBL/GenBank/DDBJ databases.

EMBL; Af673692; AAT76980.1;

EMBL; Af67362; AAT76980.1;

EMBL; Af67362; AAT76980.1;

InterPro; IPR000182; P:group III metabotropic glutamate receptor 7.

InterPro; IPR000182; MAF receptor.

InterPro; IPR000162; Mtglu_receptor.

InterPro; IPR000162; Mtglu_receptor.

InterPro; IPR000164; Mtglu_receptor.

InterPro; IPR000166; Mtglu_rece
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ..
7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 908;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SKLIQKGNDRPNGEVKSELCESLETNTSSTKTTYISYSNHSI 908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       542 SNKFTOKGNFRPNGBAKSELCENLETPALATKOTYVTYTNHAI 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             908 AA; 101827 MW; E9952B6D356EB8A8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25-OCT-2004 (TrEMBLrel. 28, Created)
25-OCT-2004 (TrEMBLrel. 28, Last sequence update)
25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           76.5%; Score 2377; DB 2; 75.0%; Pred. No. 3.1e-185; ive 60; Mismatches 84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Metabotropic glutamate receptor 8A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 75.09
Matches 437; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Receptor.
SEQUENCE
                                                999
                                                                                             302
                                                                                                                                                                                              362
                                                                                                                                                                                                                                                                                           422
                                                                                                                                                                                                                                                                                                                                            746
                                                                                                                                                                                                                                                                                                                                                                                         482
                                                                                                                                                                                                                                                                                                                                                                                                                                         908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q6B964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOW KEN WAS A SOUTH OF THE SOUT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                   요
                                                                                                                                                                                                                                 요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                           8
                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RTSCQPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SAGTEVTENĪRIGDĀPĒRYDIPOYQITNKSTEYKVIGHWTNQ
LHLKVED -> CRRGIQMSLPWPTLFTPSFSSSWAVLALLS
LLMKTEMLLDVMISSSIK (in isoform C).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | IRNVNFSGIAGNPVTFNENGDAPGRYDIXQXQLRNGSAEXKVIGSWTDHLHLRIERMQWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HREHTHPASVCSLPCKPGERKKTVKGVPCCWHCERCEGYNYQVDELSCELCPLDQRPNWN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 i,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    62 NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-linked (GlCNAc. .) (Potential).
N-linked (GlCNAc. .) (Potential).
N-linked (GlCNAc. .) (Potential).
TSSTKTTYISYSNHSI -> SKSSVEFPMVKSGSTS
PROSITE; PS00979; G_PROTEIN RECEP_F3_1; 1.
PROSITE; PS00980; G_PROTEIN_RECEP_F3_2; 1.
PROSITE; PS00981; G_PROTEIN_RECEP_F3_3; 1.
PROSITE; PS50259; G_PROTEIN_RECEP_F3_4; 1.
Alternative splicing; G-protein coupled receptor; Glycoprotein; Multigene family; Olfaction; Polymorphism; Signal; Transmembrane. SIGNAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                           Metabotropic glutamate receptor 8. Extracellular (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 908;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               V -> G (in dbSNP:2234948).

/FIIdaVAR 014449.

R -> A (in Ref. 2).

T -> I (in Ref. 2).

A -> G (in Ref. 2).

I -> N (in Ref. 1).

S -> T (in Ref. 2).

I -> N (in Ref. 2).

S -> T (in Ref. 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                            1 (Potential).
Cytoplasmic (Potential).
2 (Potential).
2 (Potential).
Extracellular (Potential).
3 (Potential).
                                                                                                                                                                                                                                                                                                                  3 (Potential).
Cytoplasmic (Potential).
4 (Potential).
Extracellular (Potential).
5 (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Extracellular (Potential) 7 (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7 (Potential).
Cytoplasmic (Potential)
N-linked (GlCNAc. .)
N-linked (GLCNAc. .)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Missing (In isoform C). /FIId=VSP 002034.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    76.5%; Score 2377; DB 1; 75.1%; Pred. No. 3.1e-185; ive 58; Mismatches 85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               002033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 002032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cytoplasmic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        isoform B)./FTId=VSP_0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FTIG=VSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FTIG=VSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      101740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 75.1
Matches 438; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        460
642
768
904
                                                                                                                                                                                              501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             904
908 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                              CHAIN
DOWAIN
TRANSMEM
DOMAIN
TRANSMEM
DOWAIN
TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
TRANSMEM
DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VARIANT
```

SOLITER THE FEET OF THE FEET O

61

셤 8 a ò ద ò 셤 ò us-10-828-332-7.rup

```
DOMAIN
TRANSMEM
DOWAIN
TRANSMEM
DOMAIN
TRANSMEM
DOMAIN
TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
TRANSMEM
DOMAIN
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                            CHAIN
   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP 181
                                                                                                                      301
                                                                                                                                          625
                                                                                                                                                                                    685
                                                                                                                                                                                                          421
                                                                                                                                                                                                                             745
                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                            LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLIKTNRIYRIFEQGKRSVS 361
                                                                                                                                                                                                                                                                                            QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           this receptor is
                                                                                                                             566 RIGCORIPIIKLEWHSPWAVVPVPIAILGIIATTFVIVTFVRYNDTPIVRASGRELSYVL
                                                                                                                                                                            626 LTGIFLCYSITFLMIAAPDTIICSFRRIFLGLGMCPSYAALLIKTNRIHRIFEQGKKSVT
                                                                                        506 NREHTHPASVCSLPCKPGERKKTVKGVPCCWHCERCEGYNYQVDELSCELCPLDQRPNIN
                                                                                                                                                                                                                      GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Transferaction of the C-terminal tail region of the metabotropic glutamate receptor 7 with the protein kinase C substrate PICK1.";

Bur. J. Neurosci. 12:4215-4221(2000).

-I. FUNCTION: Receptor for glutamate. The activity of this receptor is mediated by a G-protein that inhibits adenylate cyclase activity.

-I. SUBGUNIT: Interacts with PRKCABP.

-I. SUBCELLUTAR LOCATION: Integral membrane protein.

-I SINSUE SPECIFICITY: Prominent expression in olfactory bulb, pointine gray, lateral reticular mucleus of the thalamus, and piriform cortex. Less abundant expression incerebral cortex, hippocampus, cerebellum, and mammillary body.
                                                                                                                   RTSCQP1PIVKLEWDSPWAVLPLFLAVVG1AATLFVVVTFVRYNDTPIVKASGRELSYVL
                                                                                                                                                                                                                                                  DLSLICLIGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                                                                                                                                                         APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus. NCBI_TAXID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             variation of rat metabotropic glutamate receptor reveals a distinct pharmacological profile.";

Mol. Pharmacol. 51:119-125(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=20571397; PubMed=11122333;
El Far O., Airas J., Wischmeyer E., Nehring R.B., Karschin A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Saugstad J.A., Kinzie J.M., Shinohara M.M., Segerson T.P.,
                                                                                                                                                                                                                                                                                                                                       SNKFTQKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI 584
                                                                                                                                                                                                                                                                                                                                                  SKILIQKGNDRPNGEVKSELCESLETNTSSTKTTYISYSNHSI 908
                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
25-OCT-2004 (Rel. 45, Last annotation update)
Metabotropic glutamate receptor 8 precursor (mGluR8).
Rattus norvegicus (Rel.)
                                                                                                                                                                                                                                                                                                                                                                                                                908 AA.
                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
MEDLINE=97168760; PubMed=9016353;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INTERACTION WITH PRKCABP.
                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                 122
                                                                                                                                                                                                                                                                                                                                       542
                                                                                                                                                                                                                                                  422
                                                                                                                                                               302
                                                                                                                                                                                                         362
                                                                                                                                                                                                                                                                                            482
                                                                                                                                                                                                                                                                                                                                                                                                                MGR8 RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Betz
                                 ઠે
                                                 ద
                                                                        ઠે
                                                                                            셤
                                                                                                                    Š
                                                                                                                                   셤
                                                                                                                                                             ò
                                                                                                                                                                                요
                                                                                                                                                                                                       ò
                                                                                                                                                                                                                        ద
                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                         a
```

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its was by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to licenseaisb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR001828; ANF receptor.

InterPro; IPR001828; ANF receptor.

InterPro; IPR0001337; GPCR Mgr.

InterPro; IPR000137; GPCR Mgr.

InterPro; IPR00014; Mtglu_receptor.

InterPro; IPR00014; Mtglu_receptor.

InterPro; IPR00194; Mrglu_receptor.

InterPro; IPR00194; Mrglu_receptor.

IPR00194; Mrglu_receptor; I.

IPR051TE; PS00980; G_PR0TEIN_RECEP_F3 1; I.

IPR051TE; PS00980; G_PR0TEIN_RECEP_F3 2; I.

IPR051TE; PS00980; G_PR0TEIN_RECEP_F3 3; I.

IPR051TE; PS00980; G_PR0TEIN_RECEP_F3 4; I.

IPR051TE; PS0059; G_PR0TEIN_RECEP_F3 4; I.

IPR051TE; PS00980; G_P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAVTILPKRASIDGFDRYFRSRTLANNRRNVWPAEFWBENFGCKLGSHG-KRNSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     506 NREHTHPASVCSLPCKPGERKKTVKGVPCCWHCBRCEGYNYQVDELSCELCPLDQRPNIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GSGQQLPRSICSLPCQPGBRKKTVKGMACCWHCBPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RTSCQPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GVSSSLPTRMT-SGFDRYPSSRTLDNNRRNIWPAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gapa
SIMILARITY: Belongs to the G-protein coupled receptor 3 family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Metabotropic glutamate receptor 8. Extracellular (Potential).

1 (Potential).

2 (Potential).

2 (Potential).

Extracellular (Potential).

3 (Potential).

Cytoplasmic (Potential).

Extracellular (Potential).

Extracellular (Potential).

Cytoplasmic (Potential).

S (Potential).

Cytoplasmic (Potential).

Cytoplasmic (Potential).

7 (Potential).

Cytoplasmic (Potential).

7 (Potential).

N-linked (GloNAc...) (Potential)

N-linked (GloNAc...) (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -linked (GlcNAc. . .) (Potential)
-linked (GlcNAc. . .) (Potential)
-linked (GlcNAc. . .) (Potential)
-linked (GlcNAc. . .) (Potential)
-linked (GlcNAc. . .) (Potential)
FCAB54CBBE3DD915 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 908;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IndelB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 2371; DB 1;
Pred. No. 9.7e-185;
); Mismatches 85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-linked
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101866 MW;
                                                                                                                                                                                                                                                                                                                                                                                         EMBL; U63288; AAB09537.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           76.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    74.88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 436; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9843
908
95
452
452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8004
819
844
895
845
850
908
8A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                              HSSP; P23385; 1EWT
RGD; 619858; Grm8
```

```
74.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 432; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                       844
95
298
452
480
480
565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity
                                                                                                                                                                            DOMAIN
TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                          DOMAIN
TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                             DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            542
                                                                                                                                                                                                                                       FRANSMEM
                                                                                                                                                                                                                                                                                                                          FRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                        TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
SOLUTION SOL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMED outstands. The European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                              421
                                                                                                                                                                               481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.

STRAIN=C57BL/6; TISSUE-Retina;
X MEDLINE=95239344; Pubmed=7722646;
X MEDLINE=95239344; Pubmed=7722646;
Duvoisin R.M., Zhang C., Ramonell K.;
Tolfactory bulb.",
J. Meurosci. 15:3075-3083(1995).
I. -I- FUNCTION: Receptor for glutamate. The activity of this receptor is mediated by a G-protein that inhibits ademylate cyclase activity.
I. SUBGNIT: Interacts with PRKCABP (By similarity).
I. SUBCIFICITY: Strongly expressed in olfactory bulb, accessory olfactory bulb, and mammillary body. Weaker expression in the retina, and in scattered cells in the cortex and hindbrain.
I. SIMILARITY: Belongs to the G-protein coupled receptor 3 family.
                                                                                                                                                                                                                                                          LAGI FLCYATTFLMI AEPDLGTCSLRRI FLGLGMSI SYAALLTKTNRI YRI FEQGKRSVS
                                                                                              APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDPQDQRTLDPRFARGVLKCDIS
                                                                                                                   DLSLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-FEE-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
25-OCT-2004 (Rel. 45, Last annotation update)
Metabotropic glutamate receptor 8 precursor (mGluR8).
Name-Grm8; Synonyms-Gprc1h, mGluR8;
Wam sursculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GO; GO:0001642; F:group III metabotropic glutamate receptor InterPro; IPR001828; ANF receptor. InterPro; IPR000337; GPCR Mgr.
                                                                                                                                                                                                                                                                                                                                             SNKFTOKGNFRPNGEAKSELCENLETPALATKOTYVTYTNHAI
                                                                                                                                                                                                                                                                                                                                                                OSKLIQKGNDRPNGEVKSELCESLETNTSSTKTTYISYSNHSI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRINTS; PR00248; GPCRMGR.
PROSITE; PS00979; G PROTEIN RECEP F3_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR000162; Mtglu_receptor.
InterPro; IPR000144; Mtglu_receptora.
Pfam; PF00003; 7tm 3; 1.
Pfam; PF01094; ANF_receptor; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; U17252; AAA68149.1; -. PIR; I49142; I49142.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HSSP; P23385; 1EWK.
MGD; MGI:1351345; Grm8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOUSE
                                                        979
                                                                                                                                                                                                                                                                                                                                           542
                                                                                              362
                                                                                                                                                                               422
                                                                                                                                                                                                                       746
                                                                                                                                                                                                                                                               482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MGR8 MC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOUSE
                                                                                                                            a
                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                             à
```

```
DR PROSITE; PS00980; G PROTEIN RECEP F3 2; 1.
DR PROSITE; PS00981; G PROTEIN RECEP F3 3; 1.
DR PROSITE; PS50259; G PROTEIN RECEP F3 4; 1.
KW G-protein coupled receptor; Glycoprotein; Multigene family; Olfaction; KW Signal; Transmembrane.
FT SIGNAL 1 33 Potential.
FT CHAIN 34 908 Metabotropic 77 T DOMAIN 34 583 FT T TRANSMEM 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       62 NRERIGODSAYEQEGKVOFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        506 NREHTHPASVCSLPCKPGERKKTVKGVPCCWHCGRCEGYNYQVDELSCELCPLDQRPNIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DESLICLEGYSMILMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GSGQQLPRSICSLPCQPGBRKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RISCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLERIARDSSYEQEGKVQFVIDAVYSMAYALHNMHKELCPGYIGLCPRMVTIDGKELLGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   d (GlcNAc...) (Potential).
d (GlcNAc...) (Potential).
d (GlcNAc...) (Potential).
d (GlcNAc...) (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 908;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  89; Indels
                                                                                                                                                                                                                                                  Cytoplasmic (Potential).

Cytoplasmic (Potential).

Extracellular (Potential).

Cytoplasmic (Potential).

Cytoplasmic (Potential).

Extracellular (Potential).

Cytoplasmic (Potential).

Cytoplasmic (Potential).

Cytoplasmic (Potential).

Cytoplasmic (Potential).

Cytoplasmic (Potential).

Cytoplasmic (Potential).

Ninked (Glowac. .) (Potential).

N-linked (Glowac. .) (Potential).

N-linked (Glowac. .) (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SKLIQKGNDRPNGEVKSELCESLETNTSSTKTTYISYSDHSI 908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SNKFTOKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linked (GlcNAc. .
4CDD9D35827ED41F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           75.2%; Score 2336; DB 1; 74.1%; Pred. No. 7.1e-182;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-linked (N-linked (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      101413 MW;
```

```
DOMAIN
TRANSMEM
DOMAIN
TRANSMEM
                                                                                                                                                                               DOMAIN
TRANSMEM
DOMAIN
                                                                                                                        DOMAIN
TRANSMEM
                                                                                                                                                    DOMAIN
TRANSMEM
                                                                                                                                                                                                                                       DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  512
                                                                                                                                                                                                                                                                                                                                                                                                                                                  e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        872
                                                                                                                                                                                                                                                                                                                     CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                  SEOUENCE
                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                        TRANSMEM
                                                                                                                                                                                                                                                                               CARBOHYD
                                                                                                                                                                                                                                                                                           CARBOHYD
                                                                                                                                                                                                                                                                                                           CARBOHYD
                                                                                                                                                                                                                                                                                                                                       VARIANT
                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                            Best Loca
Matches
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         名
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GO:0005887; C:integral to plasma membrane; TAS.
GO:0008067; F:metabotropic glutamate, GABA-B-like recepto. .; TAS.
GO:0007194; P:negative regulation of adenylate cyclase ac. .; TAS.
GO:0007268; P:synaptic transmission; TAS.
                                                                                                                                                                                                                                                                                                                                                                                                                                            WEDLINE-21095249; PubMed=11163549; DOI=10.1016/S0920-9964(99)00235-2; MEDLINE-21095249; PubMed=11163549; DOI=10.1016/S0920-9964(99)00235-2; Bolonna A.A., Kerwin R.M., Munro J., Arranz M.J., Makoff A.J.; Polymorphisms in the genes for mGluR types 7 and 8: association studies with schizophrenia."; Schizophr. Res. 47:99-103(2001).

- FUNCTION: Receptor for glutamate. The activity of this receptor is mediated by a G-protein that inhibits adenylate cyclase activity.
-- SUBGINIT: Interacts with PRKCABP (By similarity).
-- SUBCELLUIY: Expressed in many areas of the brain, especially in the cerebral cortex, hippocampus, and cerebellum.
-- SIMILARITY: Belongs to the G-protein coupled receptor 3 family.
                                                                                                                                                                                                                     TISSUE-Brain;
MEDLINE-96437220; PubMed-8840028;
Makcoff A., Pilling C., Harrington K., Emson P.;
Makcoff A., Pilling C., Harrington K., Emson P.;
Muman metabotropic glutamate receptor type 7: molecular cloning and mRNA distribution in the CNS.";
Brain Res. Mol. Brain Res. 40:165-170(1996).
                                                                                                                                                                                                                                                                                                                               MEDINE-98141892; PubMed=9473604; DOI=10.1016/S0169-328X(97)00277-5; Wu S., Wright R.A., Rockey P.K., Burgett S.G., Arnold J.S., Rosteck P.R. Jr., Johnson B.G., Schoepp D.D., Belagaje R.M.; "Group III human metabotropic glutamate receptors 4, 7 and 8: molecular cloning, functional expression, and comparison of pharmacological properties in RGT cells."; Brain Res. Mol. Brain Res. 53:88-97(1998).
                                                                          01-NOV-1997 (Rel. 35, Last sequence update)
25-OCT-2004 (Rel. 45, Last annotation update)
Metabotropic glutamate receptor 7 precursor (mGluR7).
Name=GRM7; Synonyms=GPRCIG, MGLUR7;
Homo sapiens (Human).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia; Butheria, Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRINTS, PRO0248; GPCRMGR.
PROSITE, PS00979; G PROTEIN RECEP F3 1;
PROSITE; PS00980; G PROTEIN RECEP F3 2;
PROSITE; ES00981; G PROTEIN RECEP F3 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR001828; ANF receptor.
InterPro; IPR001337; GPCR_Mgr.
InterPro; IPR00162; Mtglu_receptor.
InterPro; IPR001883; Mtglu_receptor?
Pfam; PF001094; ANF_receptor; 1.
                                                                  (Rel. 35, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; X94552; CAA64245.1; -. EMBL; U92458; AAB51763.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genew, HGNC:4599, GRM7.
MIM, 604101, -.
GO; GO:0005687; C:integra
GO; GO:0000067; F:metabot.
GO; GO:0007194; P:negativ.
GO; GO:0007268; P:synapti
                                     STANDARD;
                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HSSP; P23385; 1EWK
                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                           NCBI_TaxID=9606;
                                                               01-NOV-1997
                                       MGR7 HUMAN
                                                  014831;
           RESULT 10
MGR7_HUMAN
```

```
180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        871
PROSITE; PS50259; G_PROTEIN_RECEP_F3_4; 1.
G-protein coupled receptor; Glycoprotein; Multigene family; Olfaction;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            332 GAITIOPKRATVEGFDAYFTSRTLENNRRNVWFAEYWEENFNCKLTISGSKKEDTDRKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GKGVREIPASVCTLPCKPGQRKKTQKGTPCCWTCEPCDGYQYQFDEMTCQHCPYDQRPNE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NRTSCOPI PI VKLEWDS PWAVL PLFLAVVGI AATLFVVVTFVRYNDTPI VKASGRELSYV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SQSADKLYIQTTLTVSVSLSASVSLGALYMPKVYIILFHPEQNVPKRKRSLKAVVTAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGS-AEYKVIGSWTDHLHLRIERMQW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PGSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LLAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SAPRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SDISLICLIGYSMLLMVTCTVYAIKTRGVPBTFNBAKPIGFTMYTTCIVWLAFIPIFFGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOROITCSLGXSILLMVTCTVYAIKTRGVPENFNBAKPIGFTMYTTCIVMLAFIPIFFGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                Cytoplasmic (Potential).

2 (Potential).

Extracellular (Potential).

3 (Potential).

Cytoplasmic (Potential).

4 (Potential).

5 (Potential).

Cytoplasmic (Potential).

N-linked (GlcNAc. ..) (Potential).

N-linked (GlcNAc. ..) (Potential).

N-linked (GlcNAc. ..) (Potential).

N-linked (GlcNAc. ..) (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ..
7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 915;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         71.4%; Score 2219; DB 1; Length 9 69.9%; Pred. No. 2.6e-172; tive 74; Mismatches 100; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (in dbSNP:2234977).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TIG=VAR 003584.
CFF94E06BF7F4919 CRC64;
                                                                                Metabotropic glutamate re
Extracellular (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MSNKFTQKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FTIG=VAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>د</u>
۲
                                          Transmembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ..
Æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity 69.9
es 408; Conservative
                   G-protein coupled rece
Polymorphism; Signal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     915 AA;
```

571 300 631 360

420

751

691

540

871

480 811

```
"Interaction of the C-terminal tail region of the metabotropic glutamate receptor 7 with the protein kinase C substrate PICK1."; Bur. J. Neurosci. 12:4215-421(2000).
-I- FUNCTION: Receptor for glutamate. The activity of this receptor is
                                                                                                               NRTSCQPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYV
                                                                                                                                                                                                                                                                                     301 LLAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSV
                                                                                                                                                                                                                                                                                                                                                                                                                  481 SQSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAAT
                                                                               PGSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTE
                                                                                                                                                                                                                                                                                                                                                                                          361 SAPRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421 SDLSLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN=Sprague-Dawley, TISSUE=Brain,
MEDLINE=94117433; PubMed=8288585;
Okamoto N., Hori S., Akazawa C., Hayashi Y., Shigemoto R., Mizuno N.,
Nakanishi S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JUN-1994 (Rel. 29, Last sequence update)
25-OCT-2004 (Rel. 45, Last annotation update)
Metabotropic glutamate receptor 7 precursor (mGluR7).
Name-Grm7; Synonyma-Gprc1g, Mglur7;
Rattus norvegicus (Rat).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Molecular characterization of a new metabotropic glutamate receptor mGluR7 coupled to inhibitory cyclic AMP signal transduction."; J. Biol. Chem. 269:1231-1236(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
STRAIN=Sprague-Dawley; TISSUE=Olfactory bulb;
MEDLINE=94195266; PubMed=8145723;
Saugstad J.A., Kinzie J.M., Mulvihill E.R., Segerson T.P.,
Westbrook G.L.;
"Cloning and expression of a new member of the L-2-amino-4-
phosphonobutyric acid-sensitive class of metabotropic glutamate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-20571397; PubMed-11122333;
El Far O., Airas J., Wischmeyer E., Nehring R.B., Karschin A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541 MSNKFTQKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           915 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pharmacol. 45:367-372(1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JUN-1994 (Rel. 29, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INTERACTION WITH PRKCABP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               [1] =
SEQUENCE PROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      receptors."
                                                                                  181
                                                                                                                                                                                                                                                                                                                                        632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MGR7 RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P35400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 12
MGR7_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDTTDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDDTTDDD
                                                                                                                                                                                                                                                                                                                                                                                                                                  용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                               ठ
                                                                                                                            엄
                                                                                                                                                                                      8
                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

STRAIN=C57BL/6; TISSUB=Brain;

STRAIN=C57BL/6; TISSUB=Brain;

Straubberg R.D., Feingold E.A., Grouse L.H., Derge J.G.,

Altschul S.F., Zeeberg B., Buerow K.H., Schmeer C.F., Bhat N.K.,

Altschul S.F., Zeeberg B., Buerow K.H., Schmeer C.F., Bhat N.K.,

Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hong L.,

Bitchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Stapleton M., Soares M.B., Bonaldo M.F., Casrainci P., Prange C.,

Brownstein M.J., Usdin T.B., Tochhyuki S., Carninci P., Prange C.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Broak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunarate P.H.,

Richards S., Worley K.C., Hale S., Garcia S., Garcia S.,

Richards S., Worley K.C., Hale S., Garcia B.J., Lu X., Gibbs R.A.,

Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Richards S., Worley W.C., Shevchenko Y., Boulfard G.G.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Boulfard G.G.,

Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

Jones S.J., Marra M.J.,

Rodersation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             62 NRERIGODSAYEQEGKVOFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRN-GSAEYKVIGSWTDHLHLRIERMQW 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 915;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              71.3%; Score 2214; DB 2; Length 9 69.7%; Pred. No. 6.6e-172; ive 75; Mismatches 100; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRINTS; PRO0248; GPCRMGR.
PRINTS; PRO1057; MTABOTROPCTR.
PRINTS; PRO1057; MTABOTROPICR.
PROSITE; PRO0979; G PROTEIN RECEP F3 1; 1.
PROSITE; PS00980; G PROTEIN RECEP F3 2; 1.
PROSITE; PS00981; G PROTEIN RECEP F3 3; 1.
PROSITE; PS00529; G PROTEIN RECEP F3 4; 1.
SEQUENCE 915 AA; 102218 WW; FŌAF7AEDBFBCCF71 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Director MGC Project; Submitted (AUG-2004) to the EMBL/GenBank/DDBJ databases
                                                                                                                                    Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and mouse cDNA sequences."; Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
                                                          915 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL, BC080315; AAH80315.1; --
InterPro; IPR001828; ANF receptor.
InterPro; IPR001828; ANF receptor.
InterPro; IPR00183; Mcglu_receptor.
InterPro; IPR00183; Mcglu_receptor.
InterPro; IPR011500; NCD3G_GPCR.
Ffam; PF01094; ANF receptor; I.
Pfam; PF01094; ANF receptor; I.
                                                                                                            Created)
                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
STRAIN=C57BL/6; TISSUE=Brain;
                                                                                                         25-OCT-2004 (TrEMBLrel. 28, 25-OCT-2004 (TrEMBLrel. 28, 25-OCT-2004 (TrEMBLrel. 28,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                          PRELIMINARY;
                                                                                                                                                                                                                                        Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10090;
                                                                                                                                                                                      Grm7 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      407;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                    Q68ED2;
                                                          Q68ED2
       RESULT 11
1068ED
AC 068ED
AC 068ED
DT 25-0C
DE GARAN
OC MAURA
RA MURA
RA HORE
RA RAPA
RA HORE
RA BLACE
RA BLACE
RA BLACE
RA RAPA
RA HORE
RA BLACE
RA BL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
```

ద

셤 δ

420

751

811

871

691

```
| SDLSLICLIGYSMLLMYTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GO; GO:0016020; C:membrane; IEA.
GO; GO:0008067; F:mecabotropic glutamate, GABA-B-like recepto. . .; IEA.
GO; GO:0004872; F:receptor activity; IEA.
InterPro; IPR001828; ANF receptor.
InterPro; IPR00162; MgT.
InterPro; IPR00162; MgT.
InterPro; IPR001831; MgDL.
InterPro; IPR001883; Mcglu.receptor.
InterPro; IPR011500; NCD3G_GPCR.
                                                       GKGVREIPSSVCTLPCKPGQRKKTQKGTPCCWTCEPCDGYQYQFDEMTCQHCPYDQRPNE
                                                                                                            LLAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSV
                                                                                                                                 632 LLTGIFLCYITTFLMIAKPDVAVCSFRRVFLGLGMCISYAALLITKTNRIYRIFEGGKKSV
                                     NRTSCQPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYV
                                                                                                                                                                                                                                                                                      TDLQIICSLGYSILLMVTCTVVAIKTRGVPENFNEAKPIGFTMYTTCIVWLAFIPIFFGT
                                                                                                                                                                                                                                                                                                                                SQSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAAT
                                                                                                                                                                                  SAPRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDI
                                                                                                                                                                                                       SEQUENCE FROM N.A.
MEDLINE=22048149; PubWed=12052533; DOI=10.1016/S0304-3940(02)00306-3; Schulz H.L.; Stochr H., Weber B.H.F.;
Schulz H.L.; Stochr H., Weber B.H.F.;
Characterization of three novel isoforms of the metabotropic glutamate receptor 7 (GRM7).";
Neurosci. Lett. 326:37-40(2002).
EMBL; AF458054; AAM47559.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 906;
                                                                                                                                                                                                                                                                                                                                                                                                        584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Catarrhini; Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          906 AA; 101301 MW; 53EC7BB83CBCBB61 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                           MSNKFTQKGNPRPNGEAKSELCENLETPALATKQTYVTYTNHAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-OCT-2002 (TrEMBLrel. 22, Created)
01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-UNY-2003 (TrEMBLrel. 24, Last annotation update)
Metabotropic glutamate receptor 7 variant 5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          70.5%; Score 2189; DB 2; 70.8%; Pred. No. 7.3e-170; iive 71; Mismatches 92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      906 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS, PRO1057; MTABOTROPC7R.
PRINTS, PRO0593; MTABOTROPICR.
PROSITE, PS00979; G PROTEIN RECEP F3 1, 1.
PROSITE; PS00981; G PROTEIN RECEP F3 2; 1.
PROSITE; PS00981; G PROTEIN RECEP F3 3; 1.
PROSITE; PS50259; G PROTEIN RECEP F3 3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        receptor; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota, Metazoa, Chordata,
Mammalia, Eutheria, Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 401; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00003; 7tm 3; 1.
Pfam; PF01094; ANF recept
Pfam; PF07562; NCD3G; 1.
PRINTS; PR00248; GPCRMGR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=9606;
   512
                                                                          572
                                                                                                          301
                                                                                                                                                                                  361
                                                                                                                                                                                                                    692
                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                            752
                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                                                                                                                                                          872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Receptor.
SEQUENCE
                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 13
                                ò
                                                                  셤
                                                                                              ठ
                                                                                                                                        원
                                                                                                                                                                                ò
                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                ઠ
                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            62 NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PRO0248; GPCRWGR.
PROSITE; P800979; G_PROTEIN_RECEP_F3_1; 1.
PROSITE; P800980; G_PROTEIN_RECEP_F3_2; 1.
PROSITE; P800981; G_PROTEIN_RECEP_F3_3; 1.
PROSITE; P8500559; G_PROTEIN_RECEP_F3_4; 1.
G_PROTEIN_RECEP_F3_4; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181 PGSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRN-GSAEYKVIGSWTDHLHLRIERMQW
mediated by a G-protein that inhibits adenylate cyclase activity. SUBUNIT: Interacts with PRKCABP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUBCELLULAR LOCATION: Integral membrane protein.
TISSUE SPECIFICITY: Widely distributed throughout the brain.
SIMILARITY: Belongs to the G-protein coupled receptor 3 family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cytoplasmic (Potential).
N-linked (GlcNAc. .) (Potential).
N-linked (GlcNAc. .) (Potential).
N-linked (GlcNAc. .) (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      458 N-linked (GlcNAc. .) (Potential)
486 N-linked (GlcNAc. .) (Potential)
572 N-linked (GlcNAc. .) (Potential)
102231 MW, F28AFC4C6454A6C2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Metabotropic glutamate receptor
Extracellular (Potential).
1 (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 915;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               71.1%; Score 2210; DB 1; Length 9 69.5%; Pred. No. 1.4e-171; ive 76; Mismatches 100; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6 (Potential).
Extracellular (Potential).
7 (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cytoplasmic (Potential).
4 (Potential).
Extracellular (Potential).
5 (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cytoplasmic (Potential).
2 (Potential).
Extracellular (Potential)
3 (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cytoplasmic (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Potential.
                                                                                                                                                                                                                                                                                                                                            Interpro; IPR001828; ANF receptor.
Interpro; IPR001337; GPCR_Mgr.
Interpro; IPR001052; Mtglu_receptor.
Interpro; IPR001083; Mtglu_receptor.
Pfam; PF001093; 7tm_3; 1.
                                                                                                                                                                                                                                                      EMBL; D16817; BAA04092.1; -. EMBL; U06832; AAA20655.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 69.5
Matches 406; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               925
915
915
458
486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Signal; Transmembrane.
                                                                                                                                                                                                                                                                                        PIR; A49874; A49874.
HSSP; P23385; 1EWK.
RGD; 619857; Grm7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          486
572
915 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
TRANSMEM
DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
TRANSMEM
DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN
TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
```

5

g

ò a

유 δ

ď ઠે 요 ઠે g ð

ð

```
NRTSCQPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYV 300
                                                                                                                                                                                                                                                                                                                                                                                                                                             301 LLAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSV 360
                                                                                                                                                                                                                                                                                                                                                                                                          GKGUREIPASVCTLPCKPGQRKKTQKGTPCCWTCEPCDGYQYQFDEMTCQHCPYDQRPNE
                                                                                                                                                                                                                                                                                                                                                                                                                                                          62 NRERIGODSAYEQGGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                            PGSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SDLSLICLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVMLAFIPIFFGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGS-ABYKVIGSWTDHLHLRIBRMQW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SAPRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               [1] SEQUENCE FROM N.A.
MEDLINE=22048149; PubMed=12052533; DOI=10.1016/S0304-3940(02)00306-3;
                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                        5;
                                                                                                                                                   Length 911;
                                                                                                                                                                        Indels
                                                                                                                          CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-OCT-2002 (TrEMBLrel. 22, Created)
01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-UTN-2003 (TrEMBLrel. 24, Last annocation update)
Metaborropic glutamate receptor 7 variant 3.
                                                                                                                          911 AA; 101841 MW; 178DC0821EAD05ES
                                                                                                                                                                        92;
                                                                                                                                              Ouery Match 70.5%; Score 2189; DB 2; Best Local Similarity 70.8%; Pred. No. 7.3e-170; Matches 401; Conservative 71; Mismatches 92;
Pfam; PP01094; ANF_receptor; 1.
Pfam; PP07562; NCD3G; 1.
PRINTS; PR001054; GPCRMGR.
PRINTS; PR01057; MTABOTROPC7R.
PROSITE; PS0099; G PROTEIN RECEP_F3_1; 1.
PROSITE; PS00990; G PROTEIN RECEP_F3_2; 1.
PROSITE; PS00990; G PROTEIN RECEP_F3_2; 1.
PROSITE; PS00991; G PROTEIN RECEP_F3_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ŕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MSNKFTOKGNFRPNGBAKSELCENLE 566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ||::: | : |||||||::
|MSSRLSHKPSDRPNGEAKTELCENVD 897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                            =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Name=GRM7
                                                                                                                                                                                                                          332
                                                                                                                                                                                                                                                                                                 122
                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                      512
                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    872
                                                                                                                          SEQUENCE
                                                                                                                Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OBNFS4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q8NFS4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SXORGRARS
                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                   ઠ
                                                                                                                                                                                                                                                                                                             420
                                                                                                              122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGS-AEYKVIGSWTDHLHLRIERMQW 180
                                                                                                                                                              240
                                                                                                                                                                                     571
                                                                                                                                                                                                              NRTSCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYV 300
                                                                                                                                                                                                                                      631
                                                                                                                                                                                                                                                             |LIAG|FLCYATTFLMIAEPDLGTCSLRR|FLGLGMS|SYAALLTKTNR|YR|FEQGKRSV|360
                                                                                                                                                                                                                                                                                                                                                                                    811
                                                                                                                                                                                                                                                                                                                                                                                                           SQSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAAT 540
                             451
                                                                                                                                                                                                                                                                                    691
                                                                                                                                                                                                                                                                                                                                    751
                                                                                                                                                                                                                                                                                                                                                            SDLSLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                   871
                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .; IEA
                                                                                                                                                                           GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                               NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                          PGSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTE
                                                                                                                                                                                                                           MEDILINE-22048149; Pubmed=12052533; DOI=10.1016/S0304-3940(02)00306-3; SEQUENCE =22048149; Pubmed=12052533; DOI=10.1016/S0304-3940(02)00306-3; Schulz H.L., Stoehr H., Weber B.H.F.; Characterization of three novel isoforms of the metabotropic glutamate receptor 7 (GRM7)."; Neurosci. Lett. 326:37-40(2002). EMBL; AP458053; ABM47558.1; -. HSSP; P23385; 1EWK.
                                                                             392 GQERIGKDSNYEQEGKVQFVIDAVYAMAHALHHMNKDLCADYRGVCPEMEQAGGKKILKY
                                                                                                                                                                                                                                                                                                             SAPRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-OCT-2002 (TrEMBLrel. 22, Created)
01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Metabocropic glutamate receptor 7 variant 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               911 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                           MSNKFTOKGNFRPNGEAKSELCENLE 566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (Human)
                                                                                                                                                                                                                                      572
                                                                                                                                                                                                                                                                                    632
                                        332
                                                               62
                                                                                                                                      452
                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                     592
                                                                                                                                                                                                                                                                                                                                                                                                                                   812
                                                                                                                                                                                                                                                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 872
                m
                                                                                                                                                                                                                                                                                                                                                                                    752
                                                                                                                                                                                      512
                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QBNFS3
QBNFS3;
```

a

8

8 & 8

셤

ò a ò

ò

180

511

121 451

391

61

240

571

540

871

420

751

691

631

480

```
480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              122 IRNVNPSGIAGNPVTFNENGDAPGRYDIYQYQLRNGS-AEYKVIGSWTDHLHLRIERMQW 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181 PGSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTE 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NRTSCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYV 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       62 NRERIGODSAYEQEGKVOFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S12 GKGVREIPASVCTLPCKPGORKKTOKGTPCCMTCEPCDGYQYQFDEMTCQHCPYDQRPNE 571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            572 NRTGCQDIPIIKLEWHSPWAVIPVFLAMLGIIATIFVWATFIRYNDTPIVRASGRELSYV 631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LLAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSV 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481 SQSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAAT 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .; IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     452 IRNVNFNGSAGTPVMFNRAGDAPGRYDIFQXQTTNTSNPGYRLIGQWTDELQLNIEDDQW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          632 LLTGIFLCYIITFLMIAKPDVAVCSFRRVFLGLGMCISYAALLTKTNRIYRIFEQGKKSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SDLSLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SAPRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                  GABA-B-like recepto.
Schulz H.L., Stoehr H., Weber B.H.F.;
"Characterization of three novel isoforms of the metabotropic glutemate receptor 7 (GRMY).";
Neurosci. Lett. 326:37-40(2002).
BENBL; AF458052; AAM47557.1; -..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 924;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   103375 MW; 32028B6156A71BFE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 70.5%; Score 2189; DB 2; Best Local Similarity 70.8%; Pred. No. 7.4e-170; Matches 401; Conservative 71; Mismatches 92;
                                                                                                                                                                                                        GO: GO: 0016020; C: membrane; IEA.
GO: GO: 0008067; F: metabotropic glutamate, GA: GO: 00040472; F: receptor activity; IEA.
INCEPPO: IPRO01828; ANF receptor.
INCEPPO: IPRO01829; ANF receptor.
INCEPPO: IPRO01629; Mcglu_receptor.
INCEPPO: IPRO01629; Mcglu_receptor.
INCEPPO: IPRO016509; McGlu_receptor.
INCEPPO: IPRO016509; McGlu_receptor?
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS00979; G_PROTEIN_RECEP_F3_1; 1. 980031E; PS00990; G_PROTEIN_RECEP_F3_2; 1. PROSITE; PS00991; G_PROTEIN_RECEP_F3_3; 1. PROSITE; PS50259; G_PROTEIN_RECEP_F3_4; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541 MSNKFTQKGNFRPNGEAKSELCENLE 566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ||::::|::||||||||:||||:::
|MSSRLSHKPSDRPNGEAKTELCENVD 897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00003; 7tm_3; 1. _
Pfam; PF01094; ANF_receptor; 1.
Pfam; PF07562; NCD3G; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      924 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Receptor.
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRINTS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRINTS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRINTS;
          RATTAL DO NOT THE TATAL OF THE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
```

Search completed: June 17, 2005, 18:17:24

Job time : 182 secs

This Page Blank (uspto)

```
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
```

OM protein - protein search, using sw model

Run on:

June 17, 2005, 18:08:59; Search time 42 Seconds (without alignments) 1337.871 Million cell updates/sec

US-10-828-332-7 3107 1 MPGVSSSLPTRMTSGFDRYF......LETPALATKQTYVTYTNHAI 584 Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283416 seqs, 96216763 residues Searched:

283416 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

PIR 79:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		*			SUMMARIES	
Result No.	Score	Query	Query Match Length	DB	ID	Description
-	3050.5	98.2	912	~	JH0563	ropic
7	2336	75.2		~	I49142	
m	2210	71.1		7	A49874	
4.	2111.5	68.0		~	T30806	
'n	2025	65.2		7	A46742	
9	1171.5	37.7		~	JH0561	
7	1155.5	37.2	879	N	JC7160	
æ	1152.5	37.1	879	~	JH0562	
6	1123	36.1	1180	7	JC2132	metabotropic gluta
10	1122	36.1	1199	7	A41939	G protein-coupled
11	1118	36.0	1212	~	JC2131	metabotropic gluta
12	1117.5	36.0	1111	~	A42916	metabotropic gluta
13	1114.5	35.9	1218	7	S71376	
14	989.5	31.8	666	~	T27628	hypothetical prote
15	871.5	28.0	1267	~	T21340	
16	689.5	22.2	1079	~	159362	calcium/polyvalent
17	678.5	21.8	1078	7	A56715	calcium receptor (
18	672.5	21.6	1085	~	S40476	Ca(2+)-sensing rec
19	999	21.5	1088	N	B56715	calcium receptor (
20	308.5	•	828	~	JC7683	taste receptor TIR
21	308	9.9	1099	~	T16283	hypothetical prote
22	212	•	960	~	JE0356.	gamma-aminobutyric
23	133	•	402	~	T29703	hypothetical prote
24	118	3.8	814	~	JC7389	thyroid stimulatin
25	115	•	721	~	AH3417	lpsA protein [impo
26	112	3.6	414	~	B84600	hypothetical prote
27	107.5	3.5	808	~	T51138.	probable glutamate
28	107	3.4	1024	~	AE3557	acriflavin resista
29	106.5	3.4	377	~	A69277	Na+/H+ antiporter

8 8

62 NRERIGODSAYEQEGKVOFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY 121

natriuretic peptid	probable ligand-ga	hypothetical prote	hydrophobic membra	preprotein translo	NADH2 dehydrogenas	probable sodium-tr	metal (zinc) trans	O antigen flippase	O antigen flippase	hypothetical prote	cyck protein - Rhi	probable membrane	competence locus E	conserved hypothet	acriflavin resista
S69331	F84732	T25624	T46653	BWBSSY	S44478	E81690	AF1255	B90984	E85829	T15819	861231	F70682	A64690	AE1677	B82566
~	~	~	~	-	N	~	~	~	~	~	~	~	~	~	7
205	923	993	295	431	644	244	292	461	463	692	664	667	417	427	1077
3.4	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.5	3.2	3.2	3.2	3.2	3.2	3.2
105	103.5	102	101.5	101.5	101.5	100.5	100.5	100.5	100.5	100.5	99.5	99.5	98.5	98.5	98.5
30	31	32	33	34	32	36	37	38	33	40	41	42	43	44	45

ALIGNMENTS

	RESULT 1
	metabotropic glutamate receptor 4 precursor - rat
	C;Specise: Mattus norvegicus (Norway re) - C:Date: 30-Jun-1992 #secuence revision 30-Jun-1992 #text change 09-Jul-2004
	C,Accession: JH0563; I58149
	R;Tanabe, Y.; Masu, M.; Ishii, T.; Shigemoto, R.; Nakanishi, S.
	abotropic glutamate receptors.
	A; Reference number: JHO561; MUID:92110002; PMID:1309649
	A;Molecule type: mRNA
	A; Residues: 1-912 < TAN>
	A;Lrobs-reference: unirkol: Experimental source: brain
	RiO'Hara, P.J.; Sheppard, P.O.; Thogersen, H.; Venezia, D.; Haldeman, B.A.; McGrane, V.,
	Neuron 11, 41-52, 1993 S. S. S
	A, Reference number: IS8149; MUID: 9333269; PMID: 8338667
	A,Accession: 158149
	A)Status: preliminary; translated from GB/EMBL/UDBU A.A)Jonis: trace mons
	A;Residues: 1-123,''R',125-912 <res></res>
	g205400; PIDN: AAA93190.1; PID:g205401
	C; Comment: This protein is coupled to a G protein and evokes a variety of functions by u
	C, Genetices:
	A;Gene; Guluxa C. Gunosfemily. metabotronic dintamate recentor 4
	C:Keywords: G protein-coupled receptor: @1Vcoprotein: neurotransmitter receptor: phosphc
	Fil-27 Domain: Gignal Bequence #status predicted <516>
	33-912/Product: metabotropic glutamate receptor
	transmembrane #status predicted
	F;625-645/Domain: transmembrane #Bfacus predicted II. F:625-645/Domain: transmembrane #Bfacus predicted II.
	transmembrane #status predicted
	751-772/Domain: transmembrane #status predicted
	F;786_807/Domain: transmembrane #status predicted <tvi></tvi>
	F/822-847/Domain: transmembrane #status predicted <vii></vii>
	F.89,101,454,484,559/Alinding site: Carbonyorate (ABN) (Covalent) #Bratue predicted F.631,689,695,869,889,810/Alinding site: nhosphate (Ser) (Covalent) #Bratus predicted
	Query Match 94.2%; Socre 305.5; DB 2; Length 912;
	yg.b*; tive 2
,	Qy 3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT 61
	Db 330 GAVTILERENSYRGEDRYESSRILLDINRALIFIELL

N

```
metabotropic glutamate receptor 7 - rat
NyAlternate names: metabotropic glutamate receptor mGluR7
(s)Species: metabotropic glutamate receptor mGluR7
(s)Species: nattus norvegicus (Norway rat)
C;Species: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 09-Jul-2004
C;Accession: A49874; IS794
R;OKamoto, N:; Hori, S.; Akazawa, C.; Hayashi, Y.; Shigemoto, R.; Mizuno, N.; Nakanishi, J. Biol. Chem. 269, 1231-1236, 1994
A;Title: Molecular characterization of a new metabotropic glutamate receptor mGluR7 coup
A;Reference number: A49874; MUID:94117433; PMID:8288585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Nolecule type: mENA
A;Residues: 1-915 <RES>
A;Cross-references: UNIPROT:P35400; GB:D16817; NID:g458728; PIDN:BAA04092.1; PID:g458729
A;Cross-references: UNIPROT:P35400; GB:D16817; NID:g458728; PIDN:BAA04092.1; PID:g458729
B;Saugstad, J.A.; Kinzle, J.M.; Mulvihill, B.R.; Segerson, T.P.; Westbrook, G.L.
Mol. Pharmacol. 45, 367-372, 1994
A;Title: Cloning and expression of a new member of the L-2-amino-4-phosphonobutyric acid
A;Reference number: IS7954; MUID:94195260; PMID:8145723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
301
                                                                 361
                                                                                                 685
                                                                                                                                                                      745
                                                                                                                                                                                                                                         805
                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181 PGSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTE 240
                                                                                                                                    421
                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                  LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVS
                                                                                      NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRN-GSAEYKVIGSWTDHLHLRIERMQW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RTSCQPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL
                                                                                                                                                                                                          DLSLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAPIPIFFGTS
                                                                                                                                                                                                                                                                             QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Molecule type: mRNA
A;Residues: 1-915 <RE2>
A;Cross-references: EMBL:U06832; NID:g459657; PIDN:AAA20655.1; PID:g459658
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 915;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
71.1%; Score 2210; DB 2; Length 9
Best Local Similarity 69.5%; Pred. No. 2e-172;
Matches 406; Conservative 76; Mismatches 100; Indels
                                                                                                                                                                                                                                                                                                                                               A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Superfamily: metabotropic glutamate receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Gene: MGLUR7
C;Superfamily: metabotropic glutamate
C;Keywords: neurotransmitter receptor
242
                                                                   302
                                                                                                     626
                                                                                                                                                                                                          422
                                                                                                                                                                                                                                           746
                                                                                                                                                                                                                                                                             482
                                                                                                                                                                                                                                                                                                                806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              452
                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
                                                                 8 8 8
                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                       a
                                                                                                                                                                                                         ठे
                                                                                                                                                                                                                                요
                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          metabotropic glutamate receptor 8 - mouse

C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 09-Jul-2004
C;Accession: 149142
R;Duvoisin, R.M.; Zhang, C.; Ramonell, K.
J. Neurosci. 15, 3075-3083, 1995
A;Title: A novel metabotropic glutamate receptor expressed in the retina and olfactory b
A;Recence number: 149142; MUID:95239344; PMID:7722646
A;Accession: 149142; MUID:95239344; PMID:7722646
A;Accession: 149142
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Residues: 1-908 <RES>
A;Cross-references: UNIPROT:P47743; EMBL:U17252; NID:g854728; PIDN:AAA68149.1; PID:g8547
C;Genetics:
A;Gene: mGlun8
C;Superfamily: metabotropic glutamate receptor
C;Keywords: neurotransmitter receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                          629
                                                                                                                                                                                                                                             689
                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                749
                                                                                                                                                                                                                                                                                                                                                4 è 1
                                                                                                                                                                                                                                                                                                                                                                                     809
                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                       NRERIGQDSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCRRMDPVDGTQLLKY 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                565
                                                                                                                                       RTSCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL 301
                                                                                                                                                                                                          LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLIKTNRIYRIFEQGKRSVS 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP 181
                                                                                                                                                                                                                                                                                                 QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             506 NREHTHPASVCSLPCKPGERKKTVKGVPCCWHCGRCEGYNYQVDELSCELCPLDQRPNIN
                   450 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP
                                                                   GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                      GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                         LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLIKTNRIYRIFEQGKRSVS
                                                                                                                                                                                                                                                                               APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS
                                                                                                                                                                                                                                                                                                                                                  DISLICLIGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                      DLSLICLICYSMLLMYTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAPIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            182 GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  908;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    89; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SNKFTQKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SNKFTQKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                75.2%; Score 2336; DB 2; 74.1%; Pred. No. 9.9e-183; ive 60; Mismatches 89;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 432; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                     510
                                                                                                                                       242
                                                                                                                                                                          570
                                                                                                                                                                                                                                               630
                                                                                                                                                                                                                                                                               362
                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                  422
                                                                                                                                                                                                                                                                                                                                                                                     750
                                                                                                                                                                                                                                                                                                                                                                                                                                                         810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               446
                                                                    182
                                                                                                                                                                                                            302
                                                                                                                                                                                                                                                                                                                                                                                                                       482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          542
                                                                   දු ද
                                                                                                                                                               qq
                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                         ል ይ
                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ద
                         셤
                                                                                                                           ે
                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
```

^

	Oy 555 GEAKSE 560 Db 541 GESKIE 546 RESULT 5 A46742 metabotropic glutamate receptor, mgluR6 - rat C;Species: Rattus norvegicus (Norway rat) C;Date: 21-Sep-1993 #sequence_revision 18-Nov-1994 #text_change 09-Jul-2004 C;Accession: A46742 R;Nakaijma, Y; Iwakabe, H; Akazawa, C; Nawa, H; Shiqemoto, R; Mizuno, N; Nakanishi	J. Biol. Chem. 268, 11868-11873, 1993 A.Title: Molecular characterization of a novel retinal metabotropic glutamate receptor a A; Accession: A46742 A; Accession: A46742 A; Status: preliminary A; Molecule type: nucleic acid A; Residues: 1-871 e/NAK> A; Residues: 1-871 e/NAK> A; Residues: 1-871 e/NAK> A; Cross-references: UNIPROT: P35349; GB: D13963; NID: G391856; PIDN: BAA03066.1; PID: G39185 A; Reperimental source: retina A; Cross-references: UNIPROT: P35349; GB: D13963; NID: G391856; PIDN: BAA03066.1; PID: G39185 A; Experimental source: retina A; Cross-references: UNIPROT: P35349; GB: D13963; NID: G391856; PIDN: BAA03066.1; PID: G39185 A; Experimental source: retina A; Cross-references: UniPROT: P35349; GB: D13963; NID: G391856; PIDN: BAA03066.1; PID: G39185 A; Experimental source: retina A; Experimental source: retina A; Experimental source: receptor; transmembrane protein C; Superfamily: metabotropic glutamate receptor; transmembrane protein C; Superfamily: metabotropic glutamate receptor; transmembrane protein C; Superfamily: GB: C\$; Score 2025; DB 2; Length 871; Best Local Similarity 68.6%; Pred. No. 2.5e-157; Matches 371; Conservative 64; Mismatches 102; Indels 4; Gaps 2; Matches 371; Conservative 64; Mismatches 102; Indels 4; Gaps C; Superfamily: H		Qy 359 SVSAPRISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKC 418
512 GKGVREIPESSUCT-FCKPGGRKKTQKGTPCCWTCEPCDGYQYGPDEMTCQHCPYDGRPNE 571 241 NRTSCQPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYV 300 572 NRTGCQNIPIIKLEWHSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYV 631 573 LLAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNNTPIVRAGRELSYV 631 301 LLAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNNTYRIFEGGKRSV 360 1	421 SDLSLICLLGYSMLLMYTCTVYAIKTRGVPETFNEAKPIGFTMYTTCTVWLAFIPIFFGT 480	sxt_change 09-Jul-2004 Wheller, D.; Bishop, M.; Elgar, G. growth factors in the genome of th 566 D:e1355235; PID:e1355236; PIDN:CAAC	Query Match 68.0%; Score 2111.5; DB 2; Length 551; Best Local Similarity 68.9%; Pred. No. 1.2e-164; 1; Gaps 1; 16 FDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCTNRERIGQDSAYEQE 1; 1	255 WDSPWAVLPLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVLLAGIFLCYATTFL 314

```
A; Generic modium:
A; Generic modium:
A; Generic modium:
C; Superfamily: metabotropic glutamate receptor 4
C; Superfamily: metabotropic glutamate receptor; receptor; transmembrane protein
C; Superfamily: signal sequence #status predicted <SIG>
F; 1-24 Domain: signal sequence #status predicted <SIG>
F; 25-879/Forduct: metabotropic glutamate receptor subtype 3 #status predicted <MAT>
F; 577-59/Forduct: metabotropic glutamate receptor subtype 3 #status predicted <MAT>
F; 614-634/Domain: transmembrane #status predicted <TM3>
F; 646-664/Domain: transmembrane #status predicted <TM4>
F; 735-756/Domain: transmembrane #status predicted <TM5>
F; 735-756/Domain: transmembrane #status predicted <TM6>
F; 736-756/Domain: transmembrane #status predicted <TM6>
F; 770-791/Domain: transmembrane #status predicted <TM7>
F; 804-828/Domain: transmembrane #status predicted <TM7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          metabotropic glutamate receptor subtype 3 precursor - mouse
C;Species: Mus musculus (house mouse)
C;Date: 04-Mar-2000 #sequence_revision 04-Mar-2000 #text_change 11-May-2000
C;Accession: JC7160
R;Minoshima, T.; Nakanishi, S.
B;Minoshima, T.; Nakanishi, S.
A;Title: Structural organization of the mouse metabotropic glutamate receptor subtype 3
A;Title: at unimper: JC7160; MUID:20012997; PMID:10544282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ę,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               675
                                                      468
                                                                                                       771
                                                                                                                                                                 528
                                                                                                                                                                                              497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              YVLLAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKR 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SVSAPRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKC 418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TENRISCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                557 IARIFGGAREGAQRPRFISPASQVAICLALISGQLLIVAAWLVVEAPGT-----GKETAP
                                                                                                                                                              VWLAFIPIFFGTSQSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                66 IGODSAYEQEGKVOFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLK-YIRN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          125 VNFSGI-----AGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6 SSLPTRMTSGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCTNRER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OWPGSGOOLPRSICSLPCOPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRP
                                                   PRFARGVLKCDISDLSLICLLGYSMLLMVTCTVYAIKTRGVPFTFNEAKPIGFTMYTTCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2; Length 879;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    37,2%; Score 1155.5; DB 2; 42.8%; Pred. No. 3.1e-86; tive 85; Mismatches 195;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           : | | : : | |: RAPTSRFGSAAPRASANLGQGS 850
                                                                                                                                                                                                                                                                               KRSLKAVVTAATMSNKFTQKGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Molecule type: DNA
A;Residues: 1-879 <MIN>
A;Cross-references: GB:AF170696
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
Matches 236; Conserv
                                                         409
                                                                                                             712
                                                                                                                                                                    469
                                                                                                                                                                                                                                                                               529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ठे
                                  ਨੇ
                                                                                                  g
                                                                                                                                             ે
                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                             유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                       metabotropic glutamate receptor 2 precursor - rat

C.Species: Rattus norvegicus (Norway rat)
C.Species: 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 09-Jul-2004
C.Accession: 190561
R.Tanabe, V. 190561
R.Tanabe, V. 190561
A.Actives - Manily of metabotropic glutamate receptors.
A.Reference number: JH0561; MUID:92110002; PMID:1309649
A.Accession: JH0561
A.Reference number: JH0561; MUID:92110002; PMID:1309649
A.Accession: JH0561
A.Residues: 1-872 crans.
A.Reference number: JH0561; MUID:92110002; PMID:1309649
A.Accession: JH0561
A.Residues: 1-872 crans.
A.Re
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KCTNRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQL 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                119 LK-YIRNVNFS-----GIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKV--IGSWTDH 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IYRIFEQGKRSVSAPRFISPASQLAITFILISLQLLGICWFVVDF$PYVDFQDQRTLD 408
itidtsfipmasþsag-pipasrcsepcionevksvopgevccmicipcopyeyrideft
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CADCGLGYWPNASLTGCFELPQEYIRWGDAWAVGPVTIACLGALATLFVLGVFVRHNATP
                                                                                   GTSQSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 VSSSLPTRMTSGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKL----SRHALKKGSHIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LHLRIERMOW - - PGSGQQLPRSICSLPCQPGERKKTVKGMACCWHCBPCTGYQYQVDRYT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CKTCPYDMRPTENRISCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       37.7%; Score 1171.5; DB 2; Length 872;
44.3%; Pred. No. 1.5e-87;
ive 75; Mismatches 197; Indels 41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity 44.3
Matches 249; Conservative
                                                                                                                                                                                                 539
                                                                                                                                                                                                                                                        859
                                                                                                                                                                                                    4
                                                                                                                                                                                                                                                     -<
                                                                                                                                          199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          597
                                  739
                                                                                   479
                                                                                                                                                                                                 539
                                                                                                                                                                                                                                                     859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                  셤
                                                                                   ò
                                                                                                                                                                                           ò
                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
```

Jun

Wed

```
human metab
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                             31 NVKDSSMLISLTYDVVLVILCTVYAFKTRKCPENFNEAKFIGFTMYTTCIMLAFLDFY 790
                                                                                                                                                                                                                                                      538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                    GITIKLOSPDVKWFDDYYLKLRPETNHRNPWFOEFWOHRFOCRLEGFPOENSKYNKTCNS 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NRTSCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYV 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301 LLAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSV 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTKKPRFMSACAQLVIAFILICIQLGIIVALFIMEPPDIMHDY-----PSIREVYLIC 733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DISDLSLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFF 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Accession: JC2132
A;Molecule type: mRNA
A;Residues: 1-1180 -MINA
C;Comment: This protein is coupled to guanine nucleotide binding proteins.
C;Comment: This protein; neurotransmitter; receptor; transmembrane protein
F;580-604/Domain: transmembrane #status predicted <TMA>
F;647-617/Domain: transmembrane #status predicted <TMA>
F;647-714/Domain: transmembrane #status predicted <TMA>
F;738-759/Domain: transmembrane #status predicted <TM5>
F;803-827/Domain: transmembrane #status predicted <TM5>
F;803-827/Domain: transmembrane #status predicted <TM5>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      metabotropic glutamate receptor 5 A - human
C;Species: Homo sapiens (man)
C;Date: 28-Aug-1985 #sequence_revision 07-Oct-1994 #text_change 05-Jan-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of two isoforms of
                                       GAQRPKFISPSSQVFICLGLILVQIVMVSVWLILETPGT----RRYTLPEKRETVILKC
                                                                                                                                                                                                                                                   GTSQSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILPHPEQNVPKRKRSLKAVVTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      384 --SLTLKTHHVQDSKAGFVINAIYSMAYGLHNMQMSLCPGYAGLCDAMKPIDGRKLLESL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   621 ILAGICLGYLCTFCLIAKPKOIYCYLQRIGIGLSPAMSYSALVTKTNRIARILAGSKKKI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKYI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RNVNFSGIAGNPVTFNENGDAPGRYDIYQY-QLRNGSAEYKVIGSWTDHLHLRIERMQWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GSGQQLPRSICSLPCOPGERKKTVKG-MACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SKKSNIIRSVCSEPCEKGQIKVIRKGEVSCCWTCTPCKENBYVFDBYTCKACQLGSWPTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DLTGCDLIPVQYLRWGDPEPIAAVVPACLGLLATLFVTVVFIIYRDTPVVKSSSRELCYI
                                                                                                                                DISDLSLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GVSSSLPTRMTSGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCTN
   359 SVSAPRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   --SAPRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; Accession: UC2132
R; Minakami, R.; Kateuki, F.; Yamamoto, T.; Nakamura, K.; Sugiyama, Biochem. Biophys. Res. Commun. 199, 1136-1143, 1994
A; Title: Molecular cloning and the functional expression of two is A; Reference number: UC2131; MUID:94197696; PMID:7908515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 1180;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
36.1%; Score 1123; DB 2; Length 1
Best Local Similarity 39.8%; Pred. No. 2e-83;
Matches 229; Conservative 111; Mismatches 198; Indels
                                                                                                                                                                                                                                                                                                                                                                                   539 ATMSNKFTQKG 549
                                                                                                                                                                                                                                                                                                                                                                                                                                               838 RLHLNRFSVSG 848
                                                                 919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                      419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                419
                                                 셤
                                                                                                                                                                           g
   ò
                                                                                                                                ઠે
                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                              요
                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                        ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Title: A family of metabotropic glutamate receptors.

A;Reference number: JH0561; MUD:92110002; PMID:1309649

A;Reference number: JH0561; MUD:92110002; PMID:1309649

A;Reference number: MUSRA

A;Residues: 1-879 <TAN>
A;Crosserefeences: UNTRROT:P31422

A;Experimental source: brain

C;Comment: This protein is coupled to a G protein and evokes a variety of functions by π C;Superfamily: metabotropic glutamate receptor 4

C;Superfamily: metabotropic glutamate receptor 4

C;Reywords: G protein-coupled receptor; glycoprotein; phosphoprotein; transmembrane prot F;1-22/Domain: signal sequence #status predicted <SIG>
F;3-7-599/Domain: transmembrane #status predicted <TII>
F;614-644/Domain: transmembrane #status predicted <TII>
F;689-709/Domain: transmembrane #status predicted <TII>
F;689-709/Domain: transmembrane #status predicted <TIV>
F;705/Domain: transmembrane #status predicted <TIV>
F;705/Domain: transmembrane #status predicted <TIV>
F;889-709/Domain: transmembrane #status predicted <TIV>
F;891-709/Domain: transmembrane #status predicted <TIV>
F;801-709/Domain: transmembrane #status predicted <TIV </TI>
F;801-709/Domain: transmembrane #status predicted <TIV </TI>
F;801-709/Domain: transmemb
                                                                                                                                                                                           538
GAQRPKFISPSSQVFICLGLILVQIVMVSVWLILETPGT----RRYTLPEKRETVILKC 730
                                                                                                                                                                                                                                                      837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    YVLLAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKR 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      66 IGQDSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLK-YIRN 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       379 I-DSSNYEQESKIMFVVNAVYAMAHALHKMQRTLCPNTTKLCDAMKILDGKKLYKEYLLK 437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             125 VNFSGI-----AGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERM 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        :||:
438 INFTAPFNPNKGADSIVKFDTFGDGMGRYNVFNLQQTGGKYSYLKVGHWAETLSLDVDSI 497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          179 QWPGSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRP 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       239 TENRISCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELS 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6 SSLPTRMTSGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCTNRER 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              metabotropic glutamate receptor 3 precursor - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 09-Jul-2004
C;Accession: JH0562
                                                                                                  GTSQSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTA
                                                                                                                                                                                                                            191 VISSD----YRVQTITMCISVSLSGFVVLGCLFAPRVHIVLFQPQKN-----VVTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       326 ASHPVRQ---FDRYFQSLNPYNNHRNPWFRDFWEQKFQCSLQ----NKRNHRQVCDKHLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DISDLSLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           84; Mismatches 196; Indels 35; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              F;610,845/Binding site: phosphate (Ser) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         37.1%; Score 1152.5; DB 2; Length 879; 42.8%; Pred, No. 5.4e-86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R;Tanabe, Y.; Masu, M.; Ishii, T.; Shigemoto, R.; Nakanishi,
Neuron 8, 169-179, 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity 42.8% Matches 236; Conservative
                                                                                                                                                                                                                                                                                                                     539 ATMSNKFTOKG 549
                                                                                                                                                                                                                                                                                                                                                                             RLHLNRFSVSG 848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       588
                                                                 419
                                                                                                                                                                                        479
                                                                                                                                                                                                                                                g
                                                                                                                         셤
                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
```

: : :: : : :	QY 478 FGISQSADKLYIQTTILTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSL 532	Qy 533ELC 562 Cy FINE	Pas EMBRITATION (17 21) TO 315 WINVERPENCANDIAN 929 RESULT 11 COLUMN CONTROL Glutemane receptor 5 B - human chebotropic and the functional captession of two isoforms of human metabor Articles Modeular Cloning and the functional expression of two isoforms of human metabor Articles and Column column column column capter and the functional captession of two isoforms of human metabor Articles and Column column capter and the functional captession of two isoforms of human metabor Articles and Column capter and the functional captession of two isoforms of human metabor Articles and Column capter and the functional captession of two isoforms of human metabor Articles and Column capter and the functional captes and th	
: :: :: : ::	Qy 479 GTSQSADKLYIQTTLITVSVSLSASVSLGMLYMPKCYIILEHPEQNVPKR 528 :-	Qy 529KRSLKAVVTAATMSNKFTQKGNFRPNGEA 557 	RESULT 10 Attain-coupled glutamate receptor - rat Cipaceies: Ratus moreagicus (Norway Tat) Science 252, 138-1321, 1991 Aittie: Cloning, expression, and gene structure of a G protein-coupled glutamate recept Aittie: Cloning, expression, and gene structure of a G protein-coupled glutamate recept Aittie: Cloning, expression, and gene structure of a G protein-coupled glutamate recept Aittie: Cloning, expression, and gene structure of a G protein-coupled glutamate recept AixCross-references: UNIPROT.P3385; GB:MGID99, NID:9397806; FIDN:AAA19497.1; PID:9204466 AixCross-references: UNIPROT.P3385; GB:MGID99, NID:91847995 AixCross-references: UNIPROT.P3385; GB:MGID99, NID:91847995 AixCross-references: UNIPROT.P3385; MID:9397806; FIDN:CAA40799.1; FID:956647 AixCross-references: UNIPROT.P3385; MID:938646; FIDN:CAA40799.1; PID:956647 AixCross-references: UNIPROT.P33859; NID:956646; FIDN:CAA40799.1; PID:956647 AixCross-references: UNIPROT.P3387599; NID:956646; FIDN:CAA40799.1; PID:956647 Cixcywords: G protein-coupled receptor; transmembrame protein Cixcywords: G protein-coupled receptor;	Qy 240 ENRTSCQPIPIVKLEWDSPMAVLPLFLAVVGIAATLFVVYTFVRYNDTPIVKASGRELSY 299 1

```
Sylayon of the complete the control of the control 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTRKPRFMSAWAQLVIAGLLVSVQLTLEVTLIILEPPMPVKSY-----PSIREVFLIC 756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DISDLSLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFF 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RERIGODSAYEQEGKVOFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKYI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RNVNFSGIAGNPVTFNENGDAPGRYDIYQYQ-LRNGSABYKVIGSWTDHLHLRIERMQWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GSGQQLPRSICSLPCQPGERKKTVKG-MACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LLAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTWRIYRIFEQGKRSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3 GVSSSLPTRMTSGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCTN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241 NRTSCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SA--PRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; Score 1114.5; DB 2; Length
; Pred. No. 1e-82;
97; Mismatches 189; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        479 GTSQSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      35.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 220; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
T27628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ខ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PID: d100218
                                                                                                                                                                                                                                                                                                                                                                                             Cipte: 04-Mar.1993 #sequence_revision 18-Nov-1994 #text_change 09-Jul-2004
Cipte: 05-Jul-2004
                                                                                                                     846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKYI 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NRTSCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYV 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LLAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSV 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     680 CTKKPRFMSACAQLVIAFILLCIQLGIIVALFIMEPPDIMHDY------PSIREVYLIC 732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 123 RNVNFSGIAGNPVTFNENGDAPGRYDIYQY-QLRNGSARYKVIGSWTDHLHLRIERMQWP 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62
                                                                                                                                                                                                                                                                                                                                                                     trabotropic glutamate receptor mGluR5 - rat
Species: Rattus norvegicus (Norway rat)
Date: 04-Mar-1993 #sequence_revision 18-Nov-1994 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   182 GSGQQLPRSICSLPCQPGERKKTVKG-MACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOO SKKNNIIRSVCSEPCEKGQIKVIRKGEVSCCWTCTPCKENBYVFDEYTCKACQLGSWPTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DISDLSLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NTTNLGVVTPLGYNGLLILSCTFYAFKTRNVPANFNEAKYIAFTMYTTCIIWLAFVPIYF
                                                                                          |:: : |||||||:|| GSN-----YKIITMCFSVSLSATVALGCMFVPKVYIILAKPERNVRSAFTTSTVVRMH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3 GVSSSLPTRMTSGFDRYPSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCTN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            --SLTLRTHHYQDSRMGFVINAIYSMAYGLHYMQMSLCPGYAGLCDAMKPIDGRKTLDSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    --SAPRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                         GTSQSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKR-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          36.0%; Score 1117.5; DB 2; Length 1171; ilarity 40.1%; Pred. No. 5.5e-83; Conservative 109; Mismatches 198; Indels 37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTSQSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKR----
                                                                                                                                                                                                      ---KRSLKAVVTAATMSNKFTQKGNFRPNGEA------KSEL 561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ---KRSLKAVVTAATMSNKFTQKGNFRPNGEAKS 559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity
Matches 230; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        479
                                                                                                               794
                                                      479
                                                                                                                                                                        529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                 metabotropic
                                                                                                                                                                                                                                                                                                                     RESULT
                                                                                                         g
                                                      ઠે
                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
```

```
A;Molecule type: DNA **
Mosidues 1-1277 <WIL.>
A;Rosidues 1-1277 <WIL.>
A;Cross-references: UNIRROT:093564; EMBL:278418; PIDN:CAB01699.1; GSPDB:GN00019; CESP:F4
A;Experimental source: clone F25D7
                                                                                                                        A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                              A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
                                    submitted to the EMBL Data Library, August 1996
A;Reference number: Z19409
A;Accession: T21340
                                                                                                                                                                                                                               A;Experimental source: clone F25D7
R;Kelly, P.
Rpintted to the EMBL Data Library, August 1996
A;Reference number: 219537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 completed: June 17, 2005, 18:19:06
  C; Accession: T21340; T22252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    520 HPEQNV 525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 193; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |||:|:
846 HPEKNI 851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A, Gene: CESP: F45H11.4
                                                                                                                                                                                                                                                                                                                         A, Accession: T22252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
hypothetical protein ZC506.4 - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 12-99 #sequence_revision 15-Oct-1999 #text_change 09-Jul-2004
C;Accession: T27629
R;Harris, B.

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            :||: :||||||||||:
503 NIDGSDFYQNYLLKVNPTGKTISIFSSPRLSPPSDIVGKRFRFSPQGDGPASYTILTYKP 562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTENRTSCQPIPIVKLE---WDSPW 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVLLAGIFLCYATTFLMIAEP 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDISDLSLICLLGYSMLLMVTC 439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IGQDS-AYEQEGKVQFVIDAVYAMGHALHAMHRDLCPG-------RVGLCPRMD 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -- IAGNPVTFNENGDAPGRYDIYQYQL 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QLIKDEQCCWACSKCEDYEYLINETHCVGCEQGWWPTKDRKGCFDLSLSQUKYMRWRSMY 681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DIGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVSAPRFISPASQLAITFILI 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8 LPTRMTSGFDRYFSS--RTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCTNRER 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SLVPTILAVFGIIATLFVIVVYVIYNETPVVKASGRELSYILLISMIMCYCMTFVLLSKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYAVKTRKVPENPNETKFIGFSMYTTCVVMLSWIFFFFGTGSD---FQIQTSSLCISIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LASOKVPSFEEYFMSLHPGTEAFERNKWLRELWQVKYKCEFD---TPPGSTASRC---ED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R-----NGSAEYKVIGSWIDHLHIRIERMQWPGSGQQLPRSICSLPCQPGERK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              800 GVQLIGSLIWLSVVP-----PGWRHHYPTRDQVVLTCNVPDHHFLYSLAYDGFLIVLC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTSQSADKLYIQTTTLTVSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LSASVSLGMLYMPKVY I IL FHPEQNVPKRKRSLKAVVTAATMSNKFTQKGNFRPNGEAKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
31.8%; Score 989.5; UB 2; Lenyun
Best Local Similarity 35.9%; Pred. No. 1.3e-72;
Matches 223; Conservative 102; Mismatches 211; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31.8%; Score 989.5; DB 2 35.9%; Pred. No. 1.3e-72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ELCEN-LETP----ALATKQT 575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PVDGTQLLK-YIRNVNFSG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               움
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
```

```
A;Map position: 1
A;Introns: 38/3; 90/2; 149/3; 207/1; 356/2; 413/2; 458/2; 520/3; 691/3; 777/2; 796/2; 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 418
A;Residues: 1-1267 <WI2>
A;Cross-references: EMBL:278420; PIDN:CAB01711.1; GSPDB:GN00019; CESP:F45H11.4
A;Experimental source: clone F45H11
C;Genetics:
                                                                                                                                                                                                                                                                                                                             GFRQYYTALHPENNTMNPWFREFWQQKFNCQFAVSKEDKNNENIRICSGDENL--DEQYK 385
                                                                                                                                                                                                                                                                                                                                                                                                                                      445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFBQGKRSV- 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DISDLSLICLIGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFIM---------463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PVTFNENGDAPGRYDIYQY----QLRNGSAEYKVIGSWTDHLHLRIERMQWPGSG---- 184
                                                                                                                                                                                                                                                                                                                                                                                        QEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKYIRNVNFSGIAGN 133
                                                                                                                                                                                                                                                                                             GFDRYFSSRTLDNNRRNIWPABFWEDNFHCKLS-RHALKKGSHIKKCTNRERIGQDSAYE 73
                                                                                                                                                                                                                                                                                                                                                                                                                     :: |: || :: | | | :: | | | :: | EDPKLSQVINSIRVVALGLKAMYQDRCRDNSTLCTEMLSRNGTLLYEYLLNVTYSDQFKQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ----YTTCIVWLAFIPIFFGTSQSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                185 -QQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYT--CKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RISCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361 -SAPRFISPASQLAITFILISLQLLGICVWFVVD-PSHSVVDFQDQRTLDPRFARGVLKC
                                                                                                                                                                                                                                              57;
                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                               28.0%; Score 871.5; DB 2;
llarity 35.3%; Pred. No. 7.8e-63;
Conservative 100; Mismatches 196;
```

Search con Job time :

hypothetical protein F45H11.4 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 09-Jul-2004

Appli Appli

Sequence Sequence Sequence Sequence Sequence

Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence

```
Sequence 13, Application US/09820809
Patent No. 6608176
GENERAL INFORMATION:
APPLICANT: GENERAL INFORMATION:
TILE OF INVENTION: TTASTE RECEPTOR FOR UMAMI (MONOSODIUM GLUTAMATE) TASTE
FILE REFERENCE: 70373/275576
CURRENT APPLICATION NUMBER: US/09/820,809
CURRENT FILING DATE: 2001-03-30
PRIOR PLILING DATE: 2000-03-31
NUMBER OF SEQ ID NOS: 14
SOFTWARE: PATENTIN VET. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RISCOPIPIVKLEMDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RISCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               142 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLENGSAEYKVIGSWTDHLHLRIERWQWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 3050.5; DB 4; Length 604;
Pred. No. 2.7e-300;
2; Mismatches 5; Indels 1;
US-08-486-270-6
US-08-367-264-6
US-09-153-757-6
US-09-459-715-6
US-08-687-289A-8
US-09-415-897-8
US-08-041-538-2
US-08-645-2
US-08-465-157-2
US-08-465-157-2
US-08-465-157-2
US-08-465-157-2
US-08-465-157-2
US-08-465-157-2
US-08-465-157-2
US-08-465-157-2
US-08-465-157-2
US-09-153-757-2
US-09-153-757-2
US-09-153-757-2
US-09-153-757-2
US-09-153-757-2
US-09-153-757-2
US-09-153-757-2
                                                                                                                                                                                                                                                                                                                                                                 ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98.2%;
98.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity 98.6
Matches 575; Conservative
                                       879
879
11194
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
1119
11199
11199
11199
11199
11199
11199
11199
11199
11199
11199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
1199
119
119
119
119
119
119
119
119
119
119
119
119
119
119
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               , ORGANISM: Rattus
US-09-820-809-13
                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-820-809-13
   1148.5
1148.5
1148.5
1123.5
1123.5
1123.5
1122.1
1122.1
1122.1
1121.5
1121.5
1121.5
1121.5
1121.5
1121.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Appli
Appli
Appli
Appli
Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Appl
Appl
Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Appli
Appli
Appli
Appli
Appli
                                                                                                                           June 17, 2005, 18:07:59 ; Search time 47 Seconds (without alignments) 927.554 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                              US-10-828-332-7
3107
1 MPGVSSSLPTRMTSGFDRYF......LETPALATKQTYVTYTNHAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PeTUS_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PeTUS_COMB.pep:*
                        5.1.6
Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-641-318-2
US-09-641-318-2
US-09-855-146-2
US-08-823-110-1
US-08-617-785-12
US-08-617-785-12
US-08-817-465-12
US-08-176-418-2
US-08-176-4018-2
US-08-176-4018-2
US-08-17-785-14
US-08-617-785-14
US-08-617-785-14
US-08-617-785-14
US-08-617-785-14
US-08-617-785-14
US-08-817-464-14
US-08-817-464-14
US-08-817-464-14
US-08-817-464-14
US-08-817-464-14
US-08-817-464-14
US-08-817-464-14
US-08-817-464-14
US-08-817-464-14
                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5-08-407-875-2
5-09-277-858-2
5-09-126-280-2
5-08-617-785-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-794-158-2
US-08-072-574-6
                                                                                                                                                                                                                                                                                                                             513545 segs, 74649064 residues
                      version :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                           protein search, using sw model
                                                                                                                                                                                                                                                                         BLOSUM62
Gapop 10.0 , Gapext 0.5
                        GenCore (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Issued Patents AA:*
                                                                                                                                                                                                                                                                                                                                                                                                      length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                         Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .......
                                                                                                                                                                                                                                                                                                                                                                                                      sed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Title:
Perfect score:
                                                                                                                                                                                                                                                                         Scoring table:
                                                                                           OM protein
                                                                                                                                                                                                                                                                                                                                                                                                      Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Database :
                                                                                                                                                                                                                                         Sequence:
                                                                                                                               Run on:
```

421

361 381

241

81

Gapa

ij

N

us-10-828-332-7.rai

```
Sequence 2, Application US/08617785E

Sequence 2, Application US/08617785E

Patent No. 6228610

GENERAL INFORMATION:

APPLICANT: FIOT, Peter J.

APPLICANT: Lindaur, Kristen

TITLE OF INVENTION: HWMR6, HM77) and Related DNA Compounds

TITLE OF INVENTION: HWMR6, HM77) and Related DNA Compounds

FILE REFERENCE: 4-19679/A)FCT

CURRENT APPLICATION NUMBER: US/08/617,785E

CURRENT APPLICATION NUMBER: PEO 9416553.7

EARLIER FILING DATE: 1994-09-07

EARLIER FILING DATE: 1994-08-19

EARLIER FILING DATE: 1993-09-20

SEARLIER FILING DATE: 1993-09-20

NUMBER OF SEQ ID NOS: 26

SOFTWARE: Patentin Ver. 2.0

FENDING DATE: 1990-02

SEC ID NO 2: FENDING DATE: 1990-03
                       121
                                                                                                                                        509
                                                                                                                                                                                                                          569
                                                                                                                                                                                                                                                           630 LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLIKTNRIYRIFRQGKRSVS 689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                810 QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM 869
                                                                                                    181
                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                           APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           482 QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM 541
                                                                                                                                                                                                         510 GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                             LAGIFLCYATTFLMIABPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                62 NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                            GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DESLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPFFGTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              96.7%; Score 3004.5; DB 3; Length 912; 96.7%; Pred. No. 2.4e-295; tive 6; Mismatches 12; Indels 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SNKFTOKGNFRPNGEAKSELCENLETPALATKOTYVTYTNHAI 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        542 SNKFTQKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 96.73
Matches 564; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 3
US-08-617-785-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-617-785-2
                                                                                                                                                                                  182
                                                                                                                                                                                                                                                                                                                                               302
                                                                                                                                                                                                                                                                                                                                                                                                                             362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                  ద
                                                                                                    ò
                                                                                                                                  g
                                                                                                                                                                                ठे
                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                  ठ
                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                   용
                                                                                                                                                                                                                                                                                                                                                                                                                           ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ۲;
481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                330 GAVTILPKRMSVRGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT 389
                                                                                                                                                                                502 ÓSÁDKLYIÓTTTLTVSVSLSÁSVSLGMLYMPKVYIILFHPEGNVPKRKRSLKAVVTAÁTM 561
                                                                                   QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 912;
                                                                                                                                                                                                                                                                                                                                                  Sequence 19, Application PC/TUS9109422
GENERAL INFORMATION:
APPLICANT: Mulvihill, Eileen R.
APPLICANT: Houemed, Khaled M.
APPLICANT: Almers, Molfhard
TITLE OF INVENTION: G PROTEIN-COUPLED GLUTAMATE RECEPTORS
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5; Indels
                                                                                                                                                                                                                            SNKFTQKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI 584
                                                                                                                                                                                                                                                 SNKFTQKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: LDG. NO. TOTAL COMPUTER: ADDRESS TO SPERATING SYSTEM: PC_DOS/MS-DOS SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA: APPLICATION NUMBER: PCT/US91/09422 FILING DATE: 19911212 CLASSIFICATION: 435 PRIOR APPLICATION UNBER: US 07/672,007 FILING DATE: 18-MAR-1991 PRIOR APPLICATION NUMBER: US 07/648,481 PRIOR APPLICATION NUMBER: US 07/648,481 PRIOR APPLICATION NUMBER: US 07/626,806 FILING DATE: 30-JAN-1991 PRIOR APPLICATION NUMBER: US 07/626,806 FILING DATE: 12-DEC-1990 ATTORNEY/AGENT INFORMATION: NAME: PATENCE/DOCKET NUMBER: 13990 REFERENCE/DOCKET NUMBER: 13990 REFERENCE/DOCKET NUMBER: 13952-6PC TELEFONMULLYION INFORMATION: TELEPHONE: (206) 467-9600 TELEPHONE: (206) 467-9600 TELEPHONE: (206) 467-9600 TELEPHONE: CLARACTERISTICS: SEQUENCE CHARACTERISTICS: LENGTH: 2912 amino acide TYPE: AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98.2%; Score 3050.5; DB 5; 98.6%; Pred. No. 5.2e-300; iive 2; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: Townsend and Townsend
STREET: One Market Plaza, Steuart Street Tower
CITY: San Francisco
STATE: California
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 94105-1492
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
Matches 575; Conserv
                                                                                                                                                                                                                                                                                                                                                  PCT-US91-09422-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PCT-US91-09422-19
                                                              422
                                                                                                      442
                                                                                                                                              482
                                                                                                                                                                                                                            542
                                                                                                g
                                                                                                                                                                            q
                                                              ò
                                                                                                                                              ò
                                                                                                                                                                                                                          ሯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
```

```
APPLICANT: Flor, Peter J..
APPLICANT: Flor, Peter J..
APPLICANT: Flor, Ranier
APPLICANT: Kuhn, Ranier
APPLICANT: Whin, Ranier
APPLICANT: Puttner, Irene
APPLICANT: Puttner, Irene
APPLICANT: Mopfel, Thomas
TITLE OF INVENTION: Human Metabotropic Glutamate Receptor Subtypes (HMR4,
TITLE OF INVENTION: HMR6, HMR7) and Related DNA Compounds
FILE REFERENCE: 4-19679/A/PCT
CURRENT APPLICATION NUMBER: US/09/817,464
CURRENT FILING DATE: 2001-03-26
EARLIER APPLICATION NUMBER: US/08/617,785
EARLIER PLING DATE: 1996-03-19
EARLIER APPLICATION NUMBER: RPO 9416553.7
                                                                                                                                                                                                                                                                       390 NRERIGQDSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                              IRNVNPSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP
                                                                                                                                                                                                                                                                                                                                                                                                                450 IRNVNPSGIAGNPVTFWENGDAPGRYDIYQYQLRNDSAEYKVIGSWTDHLHLRIERMHWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     510 GSGQQLPRSICSLPCQPGERKKTVKGMPCCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RTSCQPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LAGI FLCYATTFLMI AEPDLGTCSLRRI FLGLGMSI SYAALLTKTNRI YRI FEQGKRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QSADKLY1QTTTLTVSVSLSASVSLGMLYMPKVYIILFHPBQNVPKRKRSLKAVVTAATM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       810 QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM
                                                                                                                                                                                                                                                                                                                       NRERIGODSAYEQEGKVQPVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              362 APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DLSLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                                                                                                                                                                                                     3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFABFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                   ï
                                                                                                                                                                                  DB 3; Length 912;
                                                                                                                                                                                                                   Indela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SNKFTQKGNFR PNGEAKSELCENLETPALATKQTYVTYTNHAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SNKFTQKGNFRPNGEAKSELCENLEAPALATKQTYVTYTNHAI
                                                                                                                                                                              Query Match 96.7%; Score 3004.5; DB 3; Best Local Similarity 96.7%; Pred. No. 2.4e-295; Matches 564; Conservative 6; Mismatches 12;
                                                                                                                             ë
S
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; SEQUENCE CHARACTERISTICS:
; TYPE: amino acid
; TYPE: amino acid
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: US-09-641-318-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; Sequence 2, Application US/09817464; Patent No. 6515107; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-817-464-2
                                                                                                                                                                                                                                                                                        330
                                                                                                                                                                                                                                                                                                                                                                                              122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            630
                                                                                                                                                                                                                                                                                                                        62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       482
                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                            449
                                                                                                                                               509
                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                      629
                                                                                                                                                                                                                                                                                                                                                           689
                                                                                                                                                                                                                                                                                                                                                                                                                              749
                                                                                                                                                                                                                   569
       GAVTILPKRMSVRGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHVKKCT 389
                                                                                                              181
                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         869
                                         121
                                                            NERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKX
                                                                                                                                 450 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNDSAEYKVIGSWTDHLHLRIERMHWP
                                                                                                                                                                                                      GSGQQLPRSICSLPCQPGERKKTVKGMPCCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                   RTSCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL
                                                                                                                                                                                                                                                                       750 DLSLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM
                                         NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                             IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP
                                                                                                                                                                                GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                        LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVS
                                                                                                                                                                                                                                                                                                                                                                                              APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DLSLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: EXCITATORY AMINO ACID RECEPTOR PROTEIN AND RELATED NUCLEIC ACID COMPOUNDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SNKFTQKGNFRPNGEAKSELCENLEAPALATKQTYVTYTNHAI 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDIUM TYPE: Ploppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUBER: US/09/641,318
FILING DATE: 18-Aug-2000
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SNKFTQKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/08/816,178A FILING DATE: 12-MAR-1997 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE: INDIANA
COUNTRY: UNITED STATES OF AMERICA
ZIP: 46285
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: GAYLO, PAUL J.
REGISTRATION NUMBER: 36,808
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION:
TELEPHONE: (317) 276-0756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSES: ELI LILLY AND COMPANY
STREET: LILLY CORPORATE CENTER
CITY: INDIANAPOLIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 2, Application US/09641318
Patent No. 6384205
GENERAL INFORMATION;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: BELAGAJE, RAMA M.
WU, SU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 4
US-09-641-318-2
                                                                                                                                                                                                                                                                                                                                                                                                                              069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            870
       330
                                                                            390
                                                                                                           122
                                                                                                                                                                                182
                                                                                                                                                                                                                 510
                                                                                                                                                                                                                                                     242
                                                                                                                                                                                                                                                                                      570
                                                                                                                                                                                                                                                                                                                                                         630
                                         62
                                                                                                                                                                                                                                                                                                                        302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           542
                                                                                                                                                                                                                                                                                                                                                                                              362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      482
                                                                                                                                      g
                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                g
                                        õ
                                                                   g
                                                                                                ઠે
                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
```

569 301

389 121 449 181 509 241

61

Gapa

361

689 421 749 481 809 541 869

```
m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ⋩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                      510 GSGQQLPRSICSLPCQPGERKKTVKGMPCCWHCEPCTGYQYQVDRYTCKTCPYDWRPTEN 569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         750 DLSLICLLGYSMLLMYTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS 809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            869
                                                                                                                                                                                                                                                                                NRERIGODSAYEOEGKVOFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY 121
                                                                                                                                                                                                                                                                                                                                                                                                 GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                          RISCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LAGIFLCYATTFLMIABPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVS 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DESLICTLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                482 QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM 541
                                                                                                                                                                                                                                                                                                                                       122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            362 APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS 421
                                                                                                                                                                                                                       3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               810 QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM
                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Belagaje, Rama M.
APPLICANT: Belagaje, Rama M.
APPLICANT: Belagaje, Rama M.
APPLICANT: Belagaje, Rama M.
TITLE OF INVENTION: EXCITATORY AMINO ACID RECEPTOR PROTEIN
TITLE OF INVENTION: AND RELATED NUCLEIC ACID COMPOUNDS
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESSEE: Eli Lilly and Company
STREET: Lilly Corporate Center/Patent Department
CITY: Indianapolis
STATE: IN
COUNTRY: USA
                                                                                                                                                                                           1;
                                                                                                                                                             Length 912;
                                                                                                                                                                                           12; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         542 SNKFTQKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96.7%; Score 3004.5; DB 4; 96.7%; Pred. No. 2.4e-295;
                                                                                                                                                                                           6; Mismatches
                93810663.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-855-146-2
; Sequence 2, Application US/08855146
; Patent No. 6221609
; EARLIER FILING DATE: 1994-08-19
; EARLIER APPLICATION NUMBER: EPO 93
; BARLIER FILING DATE: 1993-09-20
; NUMBER OF SEQ ID NOS: 26
; SCOFWARE: PATENTIN VEY: 2.0
; SEQ ID NO 2:
LENGTH: 912
                                                                                                                                                              Query Match
Best Local Similarity 96.7
Matches 564; Conservative
                                                                                                    TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  46285
                                                                                                                                 US-09-817-464-2
                                                                                                                                                                                                                                                                                62
                                                                                                                                                                                                                                                                                                                                                                                                   182
                                                                                                                                                                                                                                                                                                                                                                                                                                                             242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                  유
                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠ
                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                              ठे
```

```
385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 302 LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVS 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  506 HREHTHPASVCSLPCKPGERKKTVKGVPCCWHCERCEGYNYQVDELSCELCPLDQRPNWN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKSLKAVVTAATM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                62 NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  182 GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          242 RISCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        362 APRPISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 76.3%; Score 2370; DB 3; Length 9
Best Local Similarity 75.0%; Pred. No. 5.5e-231;
Matches 437; Conservative 58; Mismatches 86; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  542 SNKFTOKGNFRPNGEAKSELCENLETPALATKOTYVTYTNHAI 584
COMPUTER READABLE FORM:

WEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.30
CAURENT APPLICATION DATA:
APPLICATION NUMBER: US/08/855,146
FILING DATE:
                                                                                                                                                                                                              FILING DATE:
CLASSIPFCATION: 435
CLASSIPFCATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/021,243
FILING DATE: 07-ULL-1996
ATTORNEY/AGENT INFORMATION:
NAME: Webster, Thomas D.
REGISTRATION NUMBER: X-10836
TELECOMMUNICATION INFORMATION:
TELEPHONE: (317) 276-63334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: amino acid
TOPOLOGY: linear
MULECULE TYPE: protein
US-08-855-146-2
```

```
APREISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS 421
                                                                                                                 DISLICLIGYSMILMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS 481
                                                                                                                                                                                                         482 QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM 541
                                                                                                                                                                                                                                                                                                   302 LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVS 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 2328; DB 3; Length 908; Pred. No. 1e-226;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
APPLICANT: Stormann, Thomas M.
APPLICANT: Simin, Rachel T.
APPLICANT: Hammerland, Lance G.
APPLICANT: Fuller, Forrest H.
TITLE OF INVENTION: NOVEL HUMAN METABOTROPIC
TITLE OF INVENTION: GLUTAMATE RECEPTOR
NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READBLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
COMPUTER: IBM Compatible
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: FABLES for Windows 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/604,298
FILING DATE: February 21, 1996
CLASSIFICATION DATA:
APPLICATION NUMBER: US/08/604,298
FILING DATE: Rebruary 21, 1996
RILING DATE:
APPLICATION NUMBER: 31,327
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 32,327
TELECHONR: (213) 489-1600
TELECHONR: (213) 955-0440
                                                                                                                                                                                                                                                                                                                                                                     542 SNKFTQKGNFRPNGEAKSELCENLET 567
                                                                                                                                                                                                                                                                                                                                                                                             866 QSKLIQKGNDRPNGEVKSELCESLET 891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSER: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; Sequence 1, Application US/08604298
; Patent No. 6084084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       74.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                908 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; MOLECULE TYPE: Peptide US-08-604-298-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: Los Angeles
STATE: California
COUNTRY: U.S.A.
ZIP: 90071-2066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best'Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH:
                                                                                          362
                                                                                                                                                                                 422
                                        셤
                                                                                          ઠે
                                                                                                                           a
                                                                                                                                                                                 ò
                                                                                                                                                                                                                            윱
                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         386 GLERIARDSSYEQEGKVQFVIDAVYSMAYALHNMHKDLCPGYIGLCPRMSTIDGKELLGY 445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   62 NRERIGODSAYEQEGKVOFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       506 HREHTHPASVCSLPCKPGERKKTVKGVPCCMHCBRCBGYNYQVDELSCELCPLDQRPNM 565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RTSCQPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     192 GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               74.9%; Score 2328; DB 3; Length 908; 76.0%; Pred. No. 1e-226; tive 53; Mismatches 81; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                је-226;
-hes 81; Indels
                                                                              APPLICANT: Stormann, Thomas M.
APPLICANT: Stormann, Thomas M.
APPLICANT: Simin, Rachel T.
APPLICANT: Hammerland, Lance G.
APPLICANT: Hammerland, Lance G.
APPLICANT: Hammerland, Lance G.
APLICANT: Puller, Forrest H.
TITLE OF INVENTION: NOVEL HUMAN METABOTROPIC
TITLE OF INVENTION: GLUTAMATE RECEPTOR
NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
ADDRESSEE: Lyon & Lyon
STREET: 613 West Fifth Street
STREET: Guite 470
CITY: Los Angeles
STATE: California
COUNTRY: U.S.A.
ZIP: 90071-2066
                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: 45.5" Diskette, 1.44 Mb
MERIUM COMPATIBLE
COPERATING SYSTEM: 1BM P.C. DOS 5.0
SOFTWARE: FRAESEQ for Windows 2.0
CURRENT APPLICATION DATA:
RELIGN DATE: March 24, 1997
CLASSIFICATION DATA:
APPLICATION NUMBER: 08/604,298
FILING DATE: February 21, 1996
ATTORNEY/AGENT INFORMATION:
NAME: Marburg, Richard J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: WATCHING RICHARD J. RECISTRATION NUMBER: 32,327
REFERENCE/POCKET NUMBER: 224/2
FELECOMUNICATION INFORMATION:
TELEPHONE: (213) 955-0440
TELERA: (7.35) 955-0440
TELERA: (7.3510)
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                Sequence 1, Application US/08823110 Patent No. 6077675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1: 908 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 76.0
Matches 430; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear MOLECULE TYPE: Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS:
US-08-823-110-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-823-110-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             242
```

셤 ઠે 셤 g ò 요 ઠે

ઠે

ø

```
ð
                                                           요
                                                                                                             쉱
                                                                                                                                                                    g
                                                                                                                                                                                                                       ద
                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                            ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                        ð
                                                                                           8
                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Flor, Peter J.
APPLICANT: Kuhn, Ranier
APPLICANT: Lindaur, Kristen
APPLICANT: Lindaur, Kristen
APPLICANT: Lindaur, Kristen
APPLICANT: Lindaur, Kristen
APPLICANT: Mopfel, Thomas
TITLE OF INVENTION: HRR6, HRR7) and Related DNA Compounds
TITLE OF INVENTION: HRR6, HRR7) and Related DNA Compounds
TITLE OF INVENTION: HRR6, HRR7)
CURRENT APPLICATION NUMBER: US/08/617,785E
CURRENT APPLICATION NUMBER: PO 9319
EARLIER PELING DATE: 1994-09-07
EARLIER PILING DATE: 1994-09-07
EARLIER PILING DATE: 1994-09-07
EARLIER FILING DATE: 1993-09-20
NUMBER OF SEQ ID NOS: 26
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 12
LENGHH: 915
                                           506 HREHTHPASVCSLPCKPGERKKTVKGVPCCRCEGYNYQVDELSCELCPLDQRPNMN 565
                                                                                                                                                                                                                                                                                                              626 LTGIFLCYSITFLMIAAPDTIICSFRRVFLGLGMCFSYAALLIKTNRIHRIFEQGKKSVT 685
                                                                                                                                                                                                                                                                                                                                                                OSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM 541
                                                                                                                                  122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP 181
                                                                                                                                                                                       182 GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN 241
                                                                                                                                                                                                                                                       62 NRERIGODSAYEQEGKVOFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY 121
                                                                                                                                                                                                                                           RTSCQPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL 301
                                                                                                                                                                                                                                                                                                LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVS 361
                                                                                                                                                                                                                                                                                                                                                   362 APRFISPASQLAITFILISLOLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS 421
                                                                                                                                                                                                                                                                                                                                                                                                       DISLICLIGYSMILMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS 481
                           3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
 Gaps
81; Indels
 53; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               542 SNKFTQKGNFRPNGEAKSELCENLET 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 12, Application US/08617785E Patent No. 6228610 GENERAL INFORMATION:
 430; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 9
US-08-617-785-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-617-785-12
                                                                                                                                                                                                                                            242
                                                                                                                                                                                                                                                                                                302
                                                                                                                                                                                                                                                                                                                                                                                                       422
                                                                                                                                                                                                                                                                                                                                                                                                                                                            482
 Matches
                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                            g
                           ઠે
                                                   g
                                                                               ò
                                                                                                  셤
                                                                                                                                  8
                                                                                                                                                       ద
                                                                                                                                                                                    ò
                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
```

71.4%; Score 2219; DB 3; Length 915;

Query Match

```
SABLICANT: Flor, Peter J.
APPLICANT: Rounder
APPLICANT: Flor, Ranier
APPLICANT: Indaux Kristen
APPLICANT: Lindaux Kristen
APPLICANT: Lindaux Kristen
APPLICANT: Lindaux Fristen
APPLICANT: Futtner, Irene
APPLICANT: Puttner, Irene
APPLICANT: Puttner, Irene
APPLICANT: Puttner, Irene
APPLICANT: Mongfel, Thomas
APPLICANT: Mongfel, Thomas
APPLICANT: Scopel, HMR7) and Related DNA Compounds
FILE REFERENCE: 4-19679/A/PCT
CURRENT APPLICATION NUMBER: US/09/617,785
EARLIER APPLICATION NUMBER: US/08/617,785
EARLIER FILING DATE: 1994-08-19
EARLIER FILING DATE: 1994-08-19
EARLIER FILING DATE: 1993-09-20
NUMBER OF SEQ ID NOS: 26
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 12
LENGTH: 915
                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                            240
                                                                                                                                                                 451
                                                                                                                                                                                                                                        511
                                                                                                                                                                                                                                                                                                                                                 NRTSCQPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYV 300
                                                                                                                                                                                                                                                                                                                                                                                                                       301 LLAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSV 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                          391
                                                                                                                               121
                                                                                                                                                                                                                                                                                                              571
                                                                                                                                                                                                                                                                                                                                                                                   631
                                                                                                                                                                                                                                                                                                                                                                                                                                                           691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                         TDLQIICSLGYSILLMVTCTVYAIKTRGVPENFNEAKPIGFTMYTTCIVMLAFIPIFFGT
                                                                                                                                                                                                                       181 PGSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SQSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAAT
                                                                                                                                                    IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGS-AEYKVIGSWTDHLHLRIERMQW
                                                                                                                                                                                                                                                                                                                                                                                                                                          | SDLSLICLLGYSMLAMTCTVYAIKTRGVPETENEAKPIGFTMYTTCIVMLAFIPIFFGT
                                                                                                                               NRERIGODSAYEOEGKVOFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                          GVSSSLPTRMT-SGFDRYPSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SAPRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDI
                        Gaps
                        ..
7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MSNKFTQKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI 584
                      Indels
69.9%; Pred. No. 1.2.
tive 74; Mismatches 100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 12, Application US/09817464; Patent No. 6515107; GENERAL INFORMATION:
   Local Similarity 69.9% tos 408; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Homo sapiens
US-09-817-464-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -09-817-464-12
                                                                                                                                                                                                                                                                                                                512
                                                                                                                                                                                                                                                                                                                                                                                   572
                                                                                                                                                                                                       122
                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                           632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                      Matches
```

```
Sequence 2, Application Patent No. 5831047 GENERAL INFORMATION:
                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-452-734A-2
                                                                                                                                                                                                                                                                    ო
                                                                                                                                                                                                                                                                                            332
                                                                                                                                                                                                                                                                                                                    62
                                                                                                                                                                                                                                                                                                                                                                   122
                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  872
                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                         요
                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                      요
                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                   요
                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                         ä
                                                                                                                      451
                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                871
                                                                                              121
                                                                                                                                                                     511
                                                                                                                                                                                                                    571
                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                                                                                 811
                                                            122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGS-AEYKVIGSWIDHLHLRIERMQW 180
                                                                                                                                                                                           181 PGSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTE 240
                                                                                                                                                                                                                                            NRTSCQPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYV 300
                                                                                                                                                                                                                                                                                          LLAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSV 360
                                                                                                                                                                                                                                                                                                                                                                   751
                                                                                                                                                                                                                                                                                                                                                                                                                                       452 IRNVNFNGSAGTPVMFNKNGDAPGRYDIFQYQTTNTSNPGYRLIGQMTDELQLNIEDDQW
                                                                                                                                                                                                         GKGVREIPASVCTLPCKPGQRKKTQKGTPCCWTCEPCDGYQYQFDEMTCQHCPYDQRPNE
                                                                                                          TDLQIICSLGYSILLMVTCTVYAIKTRGVPENFNBAKPIGFTMYTTCIVMLAFIPIFFGT
                                               3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSH1KKCT
                                                                                             NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                           SAPRFISPASOLAITFILISLOLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDI
                                                                                                                                                                                                                                                                                                                                                                                          SDLSLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPFFGT
                         Gaps
                         5
Length 915;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MSNKFTQKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Segerson, Thomas P.
APPLICANT: Kinzie, J. Mark
APPLICANT: Milvihil, Elleen R.
APPLICANT: Mulyihil, Elleen R.
APPLICANT: Westbrook, Gary L.
TITLE OF INVENTION: L-AP4 SENSITIVE GLUTAWATE RECEPTORS
TUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew LLP
                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZIP: 9411-3834
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: ISH FC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/453,862
FILING DATE: 30-MAY-1995
CLASSIFICATION: 436
71.4%; Score 2219; DB 4; ]
69.9%; Pred. No. 1.2e-215;
iive 74; Mismatches 100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Townsend and Crew
Center, 8th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 2, Application US/08453862
Patent No. 5738999
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: Two Embarcadero Cer
CITY: San Francisco
COUNTRY: USA
                       408; Conservative
           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 11
US-08-453-862-2
Query Match
Best Local S
Matches 408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        541
                                                                                              62
                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                 692
                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                 752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               872
                                                                   셤
                                                                                             ઠે
                                                                                                                 g
                                                                                                                                          ð
                                                                                                                                                               g
                                                                                                                                                                                           ઠે
                                                                                                                                                                                                               g
                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                               임
                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
```

```
240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NRTSCQPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYV 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRN-GSAEYKVIGSWTDHLHLRIERMQW 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LLAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSV 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            871
                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       512 GKGVREIPSSVCTLPCKPGQRKKTQKGTPCCWTCEPCDGYQYQFDEMTCQHCPYDQRPNE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PGSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SDESLICLIGYSMLLMVTCTVYAIKTRGVPETFNBAKPIGFTMYTTCIVWLAFIPIFFGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SQSADKLYIQTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SAPRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWPAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                              Gape
                                                                                                                                                                                                                                                                                                                                                                                                            7
                                                                                                                                                                                                                                                                                                                                                                     Length 915;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541 MSNKFTQKGNFRPNGEAKSELCENLETPALATKOTYVTYTNHAI
                                                                                                                                                                                                                                                                                                                                                                     71.1%; Score 2210; DB 1;
69.5%; Pred. No. 9.5e-215;
ive 76; Mismatches 100;
                                                  US 08/176,401
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/176,40
FILING DATE: 30-DEC-1993
ATTORNEY/AGENT INFORMATION:
NAME: Parmelee, Steven W.
REGISTRATION NUMBER: 31,990
REFERENCE/DOCKET NUMBER: 13952
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-467-9600
TELEPHONE: 206-467-9600
TELEPHONE: 206-467-9600
TELEPHONE: 415-576-0300
TELEPHONE: 415-576-0300
TELEPHONE: 915 amino acids
TYPE: amino acid
TYPE: amino acid
TYPE: amino acid
TYPE: APPL: TYPE: protein
US-08-453-862-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Segerson, Thomas P. APPLICANT: Kinzie, J. Mark APPLICANT: Mulvihill, Eileen R. APPLICANT: Saugstad, Julie A. APPLICANT: Westbrook, Gary L.
                                                                                                                                                                                                                                                                                                                                                                                                        Matches 406; Conservative
```

```
NRTSCQPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYV 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              392 GQERIĞKDSNYEQEGKVQFVIDAVYAMAHALHIMNKDLCADYRGVCPEMEQAGGKKLIKY 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRN-GSAEYKVIGSWTDHLHLRIERMQW 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAITIQPKRATVEGFDAYFTSRTLENNRRNVWFAEYWEENFNCKLTISGSKKEDTDRKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        62 NERIGODSAYBORGKVOFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181 PGSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   512 GKGVREIPSSVCTLPCKPGORKKTQKGTPCCWTCEPCDGYQYOFDEMTCOHCPYDORPNE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                71.1%; Score 2210; DB 3; Length 915; 69.5%; Pred. No. 9.5e-215; ive 76; Mismatches 100; Indels 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Segeraon, Thomas P.
APPLICANT: States J. Wark
APPLICANT: Mulvihill, Eileen R.
APPLICANT: Mulvihill, Eileen R.
APPLICANT: Saugstad, Julie A.
APPLICANT: Westbrook, Gary L.
TITLE OF INVENTION: L-AP4 SENSITIVE GLUTAMATE RECEPTORS
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew LLP
STREET: Two Embarcadero Center, 8th Floor
CITY: San Francisco
                                                                                                                                                        COUNTRY: USA
ZIP: 94111-3834
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
COMPUTER: Day of the Compatible
CLASSIFICATION NUMBER: US/08/176,401B
FILING DAYE: 30-DECEMBER-1993
CLASSIFICATION NUMBER: US/08/176,401B
REGISTRATION NUMBER: 31,990
REGISTRATION NUMBER: 31,990
REGISTRATION NUMBER: 13,952-18-2
TELEPHONE: 206-467-9600
TELEPHONE: 206-467-9600
TELEPHONE: 206-467-9600
TELEPHONE: COMPUTER OF THE COMPUTER OF TH
                                                                                                                    541 MSNKFTQKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI
                                                                                                                                                                                                                                                                                                                                                                              Sequence 2, Application US/08176401B; Patent No. 6274330; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
LENGTH: 915 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
nes 406; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                   US-08-176-401B-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-176-401B-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                 δ
                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRN-GSAEYKVIGSWTDHLHLRIERMQW 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181 PGSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTE 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             512 GKGVREIPSSVCTLPCKPGQRKKTQKGTPCCPTCEPCDGYQYQFDEMTCQHCPYDQRPNE 571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NRTSCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYV 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LLAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTWRIYRIFEQGKRSV 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SDLSLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               62 NRERIGQDSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SAPRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDI 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481 SQSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAAT 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCŢ 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 915;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  71.1%; Score 2210; DB 2; Length 9
69.5%; Pred. No. 9.5e-215;
ive 76; Mismatches 100; Indels
           L-AP4 SENSITIVE GLUTAMATE RECEPTORS
                                                                                                                                                                                                                                                                                    COMPUTE: US334

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/452,734A
FILING DATE: 30-MAY-1995
CLASSIPICATION: 435
PRIOR APPLICATION: A35
PRIOR APPLICATION NUMBER: US 08/176,401
FILING DATE: 30-DEC-1993
ATTORNEY/AGENT INFORMATION:
NAME: Parmelee, Steven W.
REPERRENCE/DOCKET NUMBER: 31,990
REFERENCE/DOCKET NUMBER: 31,990
REFERENCE/
                                      NUMBER OF SEQUENCES: S
CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew
STREET: Two Embarcadero Center, 8th Floor
CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 915 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 69.5
Matches 406; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: linear
MOLECULE TYPE: protein
       INVENTION:
                                                                                                                                                                                                                                                                     COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-452-734A-2
                                                                                                                                                        STREET:
CITY: Se
STATE: C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

ò

ઠે

240

571

511

391

121

360

420 751

631

480

540

871

```
GENERAL INFORMATION:

APPLICANT: Kuhn, Ranier

APPLICANT: Kuhn, Ranier

APPLICANT: Kuhn, Ranier

APPLICANT: Lindaur, Kristen

APPLICANT: Lindaur, Kristen

APPLICANT: Longfel, Thomas

TITLE OF INVENTION: Human Metabotropic Glutamate Receptor Subtypes (HMR4, TITLE OF INVENTION: Hum Metabotropic Glutamate Receptor Subtypes (HMR4, TITLE OF INVENTION: Hum Metabotropic Glutamate Receptor Subtypes (HMR4, TITLE OF INVENTION: Hum Metabotropic Glutamate Pecceptor Subtypes (HMR4, TITLE OF INVENTION: Hum Metabotropic Glutamate Receptor Subtypes (HMR4, TITLE OF INVENTION: Hum Metabotropic Glutamate Receptor Subtypes (HMR4, TITLE OF INVENTION: Hum Metabotropic Glutamate Receptor Subtypes (HMR4, TITLE OF INVENTION: NUMBER: EPO 9416553.7

EARLIER PILING DATE: 1994-09-07

EARLIER PILING DATE: 1994-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGS-AEYKVIGSWTDHLHLRIERMQW 180
                                                                                     181 PGSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTE
                                             GKGVREIPSSVCTLPCKPGQRKKTQKGTPCCWTCEPCDGYQYQFDEMTCQHCPYDQRPNE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SQSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAAT
                                                                                                                                                                                                                                                                                                       397 IRNVNFNGSAGTPVMFNKNGDAPGRYDIFQYQTTNTSNPGYRLIGQWTDELQLNIEDDMQW
                                                                                                                                                                                                                                                                                                                                                                        SDLSLICLLGYSMLLMYTCTVYAIKTRGVPETPNEAKPIGPTMYTTCIVWLAPIPIPFGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    62 NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                             SAPRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 867;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           541 MSNKFTQKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  70.5%; Score 2191.5; DB 3; 69.3%; Pred. No. 6.6e-213; ive 73; Mismatches 99; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; Sequence 4, Application US/08617785E
; Patent No. 6228610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            405;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-617-785-4
                                               512
                                                                                                                                                                                                                                632
                                                                                                                                                                                                                                                                                                                                                                                                                   752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      872
                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Loca
Matches
                                        g
                                                                                             ð
                                                                                                                                셤
                                                                                                                                                                                ò
                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                 유
                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                          420
                                                                                                                                                                                     751
                                                                                                                                                                                                                                                                                                                        | SQSADKLYIQTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAAT 540
                                                                                                                                                                                                                                                                                                                                                                        871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       511
NRTGCQNIPIIKLEWHSPWAVIPVFLAMLGIIATIFVMATFIRYNDTPIVRASGRELSYV 631
                                                                       SDLSLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGT
                                                                                                                                                                                                                                                          62 NRERIGODSAYEQEGKVOFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LLAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSV
                                                                                                                                       SAPRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRN-GSAEXKVIGSWTDHLHLRIERMQW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 915;
                                                                                                                                                                                                                                                                                                                                                                                                                                          MSNKFTQKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: L-AP4 SENSITIVE GLUTAMATE RECEPTORS NUMBER OF SEQUENCES: 3
COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA: RELEASE #1.0, Version #1.25
PILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         71.1%; Score 2210; DB 5; Length 9
69.5%; Pred. No. 9.5e-215;
ive 76; Mismatches 100; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Parmelee, Steven W.
REGISTRATION NUMBER: 31,990
REFERENCE/DOCKET NUMBER: 13952-18PC
TELECOMMUNICATION INFORMATION:
TELEFAX: (415) 543-5043
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
TELEFAX: 415 543-5043
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/176,401
FILING DATE: 30-DEC-1993
ATTORNEY/AGENT INFORMATION:
NAME: PARTMELEE, SLEVEN W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 2, Application PC/TUS9414989 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 915 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 69.5 Matches 406; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PCT-US94-14989-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PCT-US94-14989-2
                                               301
                                                                                                                                     361
                                                                                                                                                                                  692
                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                           752
                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                     812
                                                                                                                                                                                                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                                                                                                                                                                                                                              872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       122
                                                                                   g
                                                                                                                         ઠે
                                                                                                                                                                              요
                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                   윱
                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
```

456

121

```
457 GKGVREIPASVCTLPCKPGQRKKTQKGTPCCWTCEPCDGYQYQFDEMTCQHCPYDQRPNE 516
               LLAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSV 360
                                     181 PGSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTGKTCPYDMRPTE 240
                                                                                                 301
                                        577
              8 6
                                                                                               8 8
```

Search completed: June 17, 2005, 18:18:18 Job time : 51 secs

```
June 17, 2005, 17:59:08 , Search time 165 Seconds (without alignments) 1368.897 Million cell updates/sec
                                                                                                                                                           US-10-828-332-7
3107
1 MPGVSSSLPTRMTSGFDRYF......LETFALATKQTYVTYTNHAI 584
                                                                                                                                                                                                                                                                                                                     2105692
5.1.6
Compugen Ltd
                                                                                                                                                                                                                                                                                                              Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                  2105692 seqs, 386760381 residues
GenCore version
Copyright (c) 1993 - 2005
                                                                                                                                                                                                                                                                                                                                                                                                    Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                               OM protein - protein search, using sw model
                                                                                                                                                                                                                                BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           geneseqp2002s:*
geneseqp2003as:*
geneseqp2003bs:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A_Geneseq_16Dec04:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          geneseqp1980s:*geneseqp1990s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           geneseqp2000s:*geneseqp2001s:*
                                                                                                                                                                                                                                                                                                                                                   length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Minimum DB seq
Maximum DB seq
                                                                                                                                                                                Perfect score:
                                                                                                                                                                                                                                 Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Database :
                                                                                                                                                                                                  Sequence:
                                                                                                                                                                                                                                                                                  Searched:
                                                                                                Run on:
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

geneseqp20048:*

SUMMARIES

Description	Abr56244 Rat gluta	Abg74133 Rat metab	Ade58164 Rat Prote	Ade58168 Rat Prote	Ado29095 Mouse nov	Aao15101 Human ph8	Aar82658 Human mGl	Aae23757 Human met	Abp81846 Human met	Human	Ade58166 Human Pro	Ado29094 Human nov	Adq89114 Human uro	Aar72092 Human mGl	Adr08623 Human pro	Abm84666 Human dia	Adr10452 Human pro	Abm84667 Human dia	Aao15102 Human phm	Abr62488 Human met	Abr62489 Human met	Ado29476 Human GPC	Abr62490 Human met	Aaw41568 Human met	Abb09564 Human GRM
q i	ABR56244	ABG74133	ADE58164	ADE58168	AD029095	AA015101	AAR82658	AAE23757	ABP81846	ADE58170	ADE58166	AD029094	ADQ89114	AAR72092	ADR08623	ABM84666	ADR10452	ABM84667	AA015102	ABR62488	ABR62489	AD029476	ABR62490	AAW41568	ABB09564
DB	9	9	7	7	æ	Ŋ	N	Ŋ	ø	7	7	æ	œ	~	œ	æ	œ	œ	'n	9	ø	œ	9	~	Ŋ
Length	584	604	912	912	606	606	912	912	912	912	912	912	912	912	591	886	196	862	1422	908	806	906	906	908	908
Query Match	100.0	98.2	98.2	98.2	97.1	96.7	6.7	96.7	96.7	96.7	96.7	96.7	96.7	9.96	93.7	91.8	87.5	87.3	87.2	76.5	76.5	76.5	76.4	76.3	76.3
Score	3107	3050.5	3050.5	3050.5	3017	3004.5	3004.5	3004.5	3004.5	3004.5	3004.5	3004.5	3004.5	3001.5	2912.5	2852.5	2719	2713	2710.5	2377	2377	2377	2374	2370	2370
Result No.	-	7	m	4	ß	9	7	80	σ	10	11	12	13	14	15	16	17	18	19	70	21	22	23	24	25

Abp81850 Human met	Ade31729 Human 255	Adq89128 Human uro	Human	Novel	Mouse	Human	Abg29452 Novel hum	Human	Human	Ade55969 Human Pro	Adj93191 Human met	Ado29103 Human nov	Aar72097 Human mGl	Abg95164 Human GPC	Ado29104 Mouse nov	Abg95165 Human GPC	Abg95166 Human GPC	Aar80479 Rat metab	Aae30199 Rat metab
ABP81850	ADE31729	ADQ89128	ABR62491	ABG29451	AD029477	AAW49928	ABG29452	ABG95155	ABP81849	ADE55969	ADJ93191	AD029103	AAR72097	ABG95164	AD029104	ABG95165	ABG95166	AAR80479	AAE30199
9	7	œ	9	4	80	N	4	ហ	9	7	7	œ	~	Ŋ	æ	ស	'n	~	9
908	806	908	908	1142	908	908	913	915	918	915	915	915	915	915	915	915	915	915	918
76.3	76.3	76.3	76.2	75.6	75.2	74.9	74.9	71.4	71.4	71.4	71.4	71.4	71.3	71.3	71.3	71.2	71.2	71.1	71.1
2370	2370	2370	2369	2348	2336	2328	2328	2219	2219	2219	2219	2219	2215	2214	2214	2213	2212	2210	2210
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

ALIGNMENTS

Novel glutamic acid receptor protein and encoded DNA, applicable in screening agonists or antagonists of glutamic acid or allosteric modulator for use as drugs in ameliorating symptoms and diseases e.g. obesity. Rat; anorectic; antiulcer; antidiabetic; laxative; antidiarrheic; glutamic acid receptor; receptor; gastrointestinal tract disorder; sitieirgia; obesity; ulcer; diabetes; constipation; diarrhoea. ĸ. Torii Uneyama H, ABR56244 standard; protein; 584 AA 23-OCT-2002; 2002WO-JP010984. 23-OCT-2001; 2001JP-00325159. San Gabriel A, Maekawa T, glutamic acid receptor. 20-NOV-2003 (first entry) (AJIN) AJINOMOTO CO INC. WPI; 2003-430418/40. N-PSDB; ACC70676. Rattus norvegicus. WO2003035873-A1. 01-MAY-2003. ABR56244;

Claim 3; Page 33-35; 39pp; Japanese.

The present sequence is the protein sequence for rat glutamic acid receptor. The receptor has a transmembrane domain and an intracellular domain common to type 4 metabotropic glutamic acid receptor protein, and an extracellular domain shorter by 316 or 327 amino acid residues than type 4 metabotropic glutamic acid receptor protein. The receptor and its coding sequence are useful in screening agonists or antagonists of glutamic acid or allosteric modulator for use as drugs in ameliorating symptoms and diseases due to abnormal metabolism in gastrointestinal tract including small and large intestines e.g. sitiatrgia, obesity, ulcer, diabetes, constipation and diarrhoea

SD;

us-10-828-332-7.rag

```
WPI; 2003-182515/18.
N-PSDB; ABX16077.
Chaudhari N, Roper
                                                                                                                                                                                                                                                                                                    m
                                                                                                                                                                                                                                                                                                                    22
                                                                                                                                                                                                                                                                                                                                  62
                                                                                                                                                                                                                                                                                                                                                 82
                                                                                                                                                                                                                                                                                                                                                                                                              202
                                                                                                                                                                                                                                                                                                                                                                                                                             242
                                                                                                                                                                                                                                                                                                                                                                                                                                           262
                                                                                                                                                                                                                                                                                                                                                                                                                                                           302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     482
윤
                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                              ठ
                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                       용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                     ö
                                                                                                                                                                                                                                                                       480
                                                                                                                                               240
                                                                                  120
                                                                                           TNRERIGODSAYEOEGKVOFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLK 120
                                                                                                                 180
                                                                                                                          240
                                                                                                                                                                            NRTSCOPIPIVKLEWDSPWAVLELFLAVVGIAATLEVVVTFVRYNDTFIVKASGRELSYY 300
                                                                                                                                                                                            300
                                                                                                                                                                                                           360
                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                                                                    540
                                                                  9
                                                                                                                                                       SDLSLICLIGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGT
                                                                                                                                                                                                                                                                                                              SQSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAAT
                                                                   1 MPGVSSSLPTRMTSGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKC
                                                                                   TNRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLK
                                                                                                                 YIRNVNFSGIAGNPVTFNENGDAPGRYD1YQYQLRNGSAEYKV1GSWTDHLHLR1ERMQW
                                                                                                                                               PGSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTE
                                                                                                                                                                                      NRTSCQPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYV
                                                                                                                                                                                                           LLAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSV
                                                                                                                                                                                                                                                                                      SDLSLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGT
                                                                                                                                                                                                                                                                                                     SQSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKKKRSLKAVVTAAT
                                                     1 MPGVSSSLPTRMTSGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKC
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rat; metabotropic glutamate receptor; mGluR4; umami; taste; receptor; umami mimicking compound; monosodium L-glutamate; cAMP.
                                      Gaps
                                     ö
                      Length 584;
                                                                                                                                                                                                                                                                                                                                   584
                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                    MSNKFTQKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI
                      Score 3107; DB 6;
Pred. No. 6.4e-314;
                                      ö
                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                      Rat metabotropic glutamate receptor mGluR4.
                                                                                                                                                                                                                                                                                                                                                                                         Æ
                                                                                                                                                                                                                                                                                                                                                                                        ABG74133 standard; protein; 604
                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-MAR-2001; 2001US-00820809.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31-MAR-2000; 2000US-0193454P.
                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                     Matches 584; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (UYMI-) UNIV MIAMI
                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US2002151052-A1.
        Sequence 584 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                      03-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17-0CT-2002
                                                                                                                                                                                                                                                                                                                                                                                                        ABG74133;
                                                                                   61
                                                                                                  61
                                                                                                                               121
                                                                                                                                                                             241
                                                                                                                                                                                            241
                                                                                                                                                                                                           301
                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                 121
                                                                                                                                               181
                                                                                                                                                              181
                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rattus
                                                                                                                                                                                                                                                                                                                                                                                 RESULT
 ž S
                                                                 g
                                                                                                 a
                                                                                                                            요
                                                                                                                                                            g
                                                                                                                                                                                         g
                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                   ద
                                                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                   ઠે
                                                                                                                ઠે
                                                                                                                                               ઠે
                                                                                                                                                                           ò
```

```
The invention relates to a rat metabotropic glutamate taste receptor having a molecular weight of 68 kDa, mGluR4, appearing as ABG74133. Also included are an isolated mRNA molecule encoding mGluR4 appearing as ABX16097, and sequence) and the human homologue appearing as ABX16097, a mammalian cell transfected with cDNA encoding mGluR4 (the cDNA expressed to the hemmanian cell transfected with cDNA encoding mGluR4 (the cDNA expressed configurable metabotropic glutamate taste receptors) and screening samples for umam iminicking compounds (comprising: (a) transfecting samples for umam iminicking compounds (comprising: (a) transfecting caste receptor; (b) culturing the transfected cells in an environment that promotes expression of immunologically recognisable metabotropic glutamate taste receptors; (c) treating the transfected cells with a compound that induces cAMP production; (d) incubating the cells with a compound that induces cAMP production; (d) incubating the granific containing a potential umam iminicking compound to the metabotropic glutamate taste receptors; (e) measuring the amount of cAMP produced; and (f) correlating suppression of cAMP production with unami mimicking compound binding to the metabotropic glutamate taste ceceptors; (e) measuring the amount of camp is unseful for screening so tumami taste receptor; and responds to monosodium L-glutamate binding by decreasing cellular level of cAMP. The cell is useful for screening for umami mimicking compounds.

The mGluk4 is useful for screening for umami mimics. The present sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        81
Novel metabotropic glutamate taste receptor which functions as a umami taste receptor, useful for screening for umami mimicking compounds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APRISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFODQRTLDPRFARGVLKCDIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DESLICELGYSMILMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAVTILPKRMSVRGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   182 GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RTSCQPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GVSSSLPTRMT-SGPDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6; Length 604;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ..
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 3050.5; DB 6,
Pred. No. 5.2e-308;
2; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             represents the rat mGluR4 protein
                                                                                             Claim 1; Page 7; 23pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 98.6
Matches 575; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 604 AA;
```

m

```
(GEHO ) GEN HOSPITAL CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-JAN-2004 (first entry)
                             Query Match
Best Local Similarity 98.6°
Matches 575; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rattus norvegicus.
 Sequence 912 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO2003016475-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27-FEB-2003.
                                                                                                                                                    62
                                                                                                                                                                                                                                                                                                                                                                                                302
                                                                                                                                                                                                                                                                                                                                                                                                                                                            362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADE58168;
                                                                                                                                                                                                                                                                          182
                                                                                                                                                                                                                                                                                                                                    242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADE58168
                                                                                                                    셤
                                                                                                                                                    ઠે
                                                                                                                                                                             셤
                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      or human polynucleotides or composition to more interior and polynucleotides a composition of the nucleic acid sequence. Also derivative or allelic variation of the nucleic acid sequence. Also claimed are a vector comprising the novel polynucleotide, a host cell comprising the vector is method for identifying a nucleotide sequence which is differentially regulated in an animal subjected to pain and a stray, a method for identifying an agent that increases or decreases the expression of the polynucleotide sequence that is differentially expressed in neuronal tissue of a first animal subjected to pain, a method for identifying a compound which regulates the expression of a polynucleotide sequence which is differentially expressed in an animal subjected to pain, a method for identifying a compound that regulates the activity of one or more of the polynucleotides, a method for producing a pharmaceutical composition, a method for identifying a compound useful in treating pain and a pharmaceutical composition comprising the one or more of the polypeptides given in the appetide or method for identifying a compound useful in treating pain and a pharmaceutical composition comprising the one or more polynucleotide or the compound that antibodies if the polynucleotide or the compound that antibodies if the polynucleotide or the compound that antibodies if the polynucleotide or the sequence presented is a rat protein (shown in Table 2 of the rappy). The sequence presented is a rat protein (shown in Table 2 of the sequence data for this patent did not form part of the printed specification, but was obtained in electronic form directly from WIPO at [ftp.wipo.int/pub/published_pot_esseries].
502 QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM 561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention discloses a composition comprising two or more isolated rat
                                                                                                                                                                                                                                                          Rat; pain; neuronal tissue; gene therapy; spinal segmental nerve injury; chronic constriction injury; CCI; spared nerve injury; SNI; Chung.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New composition comprising two or more isolated polypeptides, useful for preparing a medicament for treating pain in an animal.
                                            SNKFTQKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Costigan M;
                                                                                                                                    ADES8164 standard; protein; 912 AA.
                                                                                                                                                                                                                              Rat Protein P31423, SEQ ID NO 4035.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Befort K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 1; Page; 1017pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                           14-AUG-2001; 2001US-0312147P.
01-NOV-2001; 2001US-0346382P.
26-NOV-2001; 2001US-0333347P.
                                                                                                                                                                                                                                                                                                                                                                                                14-AUG-2002; 2002WO-US025765
                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (GEHO ) GEN HOSPITAL CORP. (FARB ) BAYER AG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     D'urso D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2003-268312/26
                                                                                                                                                                                                                                                                                                      Rattus norvegicus.
                                                                                                                                                                                                                                                                                                                                    WO2003016475-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENBANK; P31423
                                                                                                                                                                                                29-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                  27-FEB-2003
                             542
                                                           295
                                                                                                                                                                  ADE58164;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Woolf C,
                                                                                                                       ADE58164
셤
                             ઠે
```

```
449
                                                                                                                                                                                                                                                                                                                                                                                                                                                           510 GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN 569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           809
                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                             450 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP 509
                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVS 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                810 QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVFKRKRSLKAVVTAATM 869
                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rat; pain; neuronal tissue; gene therapy; spinal segmental nerve injury; chronic constriction injury; CCI; spared nerve injury; SNI; Chung.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    690 APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS
                                                                                                                                                                                                                                                                390 NRERIGÓDSÁYEGEGKVOFVIDÁVYÁMGHALHAMHRDLCPGRVGLCPRMDPVDGTÓLLKY
                                                                                                                                                                                                                                                                                                                    122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RTSCQPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRPARGVLKCDIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DISLICLIGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DLSLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM
                                                                                                                                                                                                              NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                                                            GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                        3 GVSSSLPTRMT-SGPDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                    Gape
                                                    ä
Length 912;
                                                    5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SNKFTOKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI 584
     DB 7;
98.2%; Score 3050.5; DB 7
98.6%; Pred. No. 9.7e-308;
iive 2; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rat Protein P31423, SEQ ID NO 4039.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADES8168 standard; protein; 912 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14-AUG-2001; 2001US-0312147P.
01-NOV-2001; 2001US-0346382P.
26-NOV-2001; 2001US-0333347P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14-AUG-2002; 2002WO-US025765
```

481

DLSLICLLGYSMLLMVTCTVYA1KTRGVPETFNEAKPIGFTMYTTCIVWLAFIP1FFGTS

```
The invention discloses a composition comprising two or more isolated rate or human polymucleotides or a polymucleotide which represents a fragment, derivative or allelic variation of the mucleic acid sequence. Also claimed are a vector comprising the movel polymucleotide, a host cell comprising the vector, a method for identifying a nucleotide sequence which is differentially regulated in an animal subjected to pain and a acray, a method for identifying an agent that increases or decreases the expression of the polymucleotide sequence that is differentially expressed in neuronal tissue of a first animal subjected to pain, a method for identifying a compound which regulates the expression of a polymucleotide sequence which is differentially compound that regulates the activity of one or more of the compound that regulates the activity of one or more of the compound that regulates the activity of one or more of the compound for identifying a compound or small molecule that regulates the activity in an animal of one or more of the polypeptides given in the specification, a method for identifying a compound useful in treating complyabitides or their antibodies. The polymucleotide or the compound that modulates its activity is useful for preparing a medicament for treating compulates its activity is useful for preparing a medicament for treating compulates its activity is useful for preparing a medicament for treating compulates its activity is useful for preparing a medicament for treating compulates its activity is useful for preparing a medicament for treating compulates its activity is useful for preparing a medicament for treating compulates its activity is useful for preparing a medicament for treating compulates its activity is useful for preparing a medicament for treating compulates its activity is useful for prepared or the compound compulation in the compulation in the parent method for indiversion, but was obtained in electronic form directly from WIPO at the people.
                                                                                                                                                                                             two or more isolated polypeptides, useful for treating pain in an animal.
                                                        Befort K, Costigan M;
                                                                                                                                                                                                                                                                                  Claim 1; Page; 1017pp; English.
                                                                                                                                                                                                   New composition comprising
preparing a medicament for
                                                     D'urso D,
                                                                                                             WPI; 2003-268312/26
(FARB ) BAYER AG
                                                                                                                                        GENBANK; P31423.
                                                  Woolf C,
```

Sequence 912 AA;

```
449
                                                                                                                                                                                                                                                                                                                                                                                                            689
                                                                                                                                                                                                                                                                                                                                                629
                                                                                                                                                                                                                        509
                                                                                                                                                                                                                                                                                    569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      749
                                                                                            330 GAVTILPKRMSVRGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT 389
                                                                                                                            121
                                                                                                                                                                                          181
                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                   RTSCQPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL 301
                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                              390 NRERIGQDSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRWDPVDGTQLLKY
                                                                                                                                                                                                        450 IRNVNFSGIAGNPVTFNENGDAPGRYDIXQYQLANGSAEYKVIGSWTDHLHLRIBRMQWP
                                                                                                                                                                                                                                                                                                                                                                             LAGIFLCYATTFLMIABPDLGTCSLRRIFLGLGMSISYAALLIKTNRIYRIFEQGKRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                           GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                            NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                        IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP
                                                                                                                                                                                                                                                     GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                       510 GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                   LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLIKTNRIYRIFEQGKRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                           APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRRARGVLKCDIS
                                 1; Gaps
Score 3050.5; DB 7; Length 912;
Pred. No. 9.7e-308;
2; Mismatches 5; Indels 1;
 98.2%;
 Query Match
Best Local Similarity 98.6'
Matches 575; Conservative
                                                                  m
                                                                                                                              62
                                                                                                                                                                                          122
                                                                                                                                                                                                                                                       182
                                                                                                                                                                                                                                                                                                                   242
                                                                                                                                                                                                                                                                                                                                                                                302
                                                                                                                                                                                                                                                                                                                                                                                                                                            362
                                                                  ð
                                                                                             임
                                                                                                                              ò
                                                                                                                                                        셤
                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                     ద
                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
```

```
Transgenic mouse; neurological disorder; adrenal gland disorder;

transgenic mouse; neurological disorder; adrenal gland disorder;

colon disorder; intestinal disorder; immune disorder; bone disorder;

colon disorder; blood disorder; immune disorder; bone disorder;

joint disorder; metabolic disorder; immune disorder; cancer;

kidney disorder; metabolic disorder; nutritive disorder; cancer;

kidney disorder; uterus disorder; prostate disorder; breast disorder;

woary disorder; thyroid disorder; pancress disorder; spleen disorder;

thymus disorder; thyroid disorder; matiparkinsonian; antimanic;

thymus disorder; antihflammatory; vasotropic; antidiarrhoeic; antidiabetic;

wirucide; hepatotropic; antibacterial; antimanici; antiseborrhoeic;

wirucide; hepatotropic; antibacterial; antimalergic; antiseborrhoeic;

wirunosuppressive; nephrotropic; gene therapy; GPCR modulator; mouse;
                                                                     541
                                                                                                        869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to human and mouse G protein-coupled receptors (GPCRs) and nucleic acids encoding them. The invention also relates to sequences at least 90% identical to the GPCR proteins and nucleic acids of the invention; methods of treating, preventing or diagnosing diseases associated with GPCRs of the invention; methods of screening for compounds useful in the treatment of GPCR-related diseases; a transgenic mouse comprising a GPCR gene of the invention; a mouse comprising a
                                                                                              QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM
                     750 DLSLICLLGYSMLLMVICTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                     QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel mammalian G protein coupled receptors, useful for identifying compounds that modulates diagnosing and treating disease condition associated with GPCR dysfunction e.g. autoimmune diseases, angina pectoris, Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  F;
H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zeng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hohmann J,
                                                                                                                                              542 SNKFTQKGNFRPNGBAKSELCENLETPALATKQTYVTYTNHAI
                                                                                                                                                                  SNKFTQKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JE, Gragerov A, Hohmann J,
Pavlova MN, Vassilatis D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 1; SEQ ID NO 194; 542pp; English.
                                                                                                                                                                                                                                                                                                                                                                                            Mouse novel GPCR GRM4, SEQ ID NO:194.
                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                              ADO29095 standard; protein; 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09-SEP-2002; 2002US-0409303P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3A, Bergmann JE,
Mcilwain KL, Pav
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        09-SEP-2003; 2003WO-US028226.
                                                                                                                                                                                                                                                                                                                                                       29-JUL-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2004-390329/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (PRIM-) PRIMAL INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               murine; receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB; ADO29096.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO2004040000-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaitanaris GA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13-MAY-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Madisen L,
                                                                                                                                                                                                                                                                                                                  ADO29095;
422
                                                                       482
                                                                                                          810
                                                                                                                                                                                   870
                                                                                                                                                                                                                                                          ADO29095
ID ADO2
                                                                                                                                                                                                                                           RESULT
                                                                                                                                                                                                                                                                                                 입
                                                                                                      셤
                                                                                                                                                                                 셤
                                                                       ð
                                                                                                                                              8
```

```
cc mutation in a GPCR transgene or in an endogenous GPCR gene; cells derived.

Cf from the trasngenic mice; kits comprising several mice, each of which has a mutation in a different GPCR gene of the invention; and kits comprising probes which hybridise to GPCR polymelectides of the invention. The probes which hybridise to GPCR polymelectides of the invention. The invention further discloses variants of the GPCR polypeptides and vectors comprising a GPCR nucleic acid. The GPCR nucleic acids and proteins may be used in the diagnosis, treatment or prevention of a wide variety of diseases including neurological disorders (e.g., Alzheimer's disease, disease, disease, disorders of the colon or intestine conspicuous disorders of the adrenal gland; disorders of the colon or intestine conspicuous disorders (e.g., archiovascial infarction); muscular disorders; blood disorders or syndroms, racatdovascular disorders (e.g., autoimmune disorders or myccardial infarction); muscular disorders; blood disorders or chromistoid archiritis, gout or osteoporosis); metabolic or nutritive disorders or obesity, enzyme deficiency-related diseases or vitamin deficiency-related diseases); and disorders of the kidney, liver, lung, breast, ovary, cuterus, prostate, testis, skin, stomach, pancreas, spleen, thymus and thymusid (e.g., cancers). The present sequence sor thymos and thymusid or specification; those sequences not shown were obtained in celectronic format directly from WIPO at this patent did not form part celectronic format directly from WIPO at the proportion or thymus disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM 866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RTSCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTRRIYRIFEQGKRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APRFISPASQLAITFVLISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DLSLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DLSLICLLGYSMLLMYTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               328 GAVTILPKRISVRGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    508 GSG-QLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RTSCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gapв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97.1%; Score 3017; DB 8; Length 909; 97.8%; Pred. No. 3e-304; ive 3; Mismatches 8; Indels ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SNKFTQKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity 97.8 es 570; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 909 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
        요.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

```
The invention comprises G-protein fusion receptors - comprising extracellular, transmembrane and intracellular domains similar to CaR, mGluR or GABAB receptor sequences. The G-protein fusion receptors of the invention may also possess a linker joined to the carboxy terminus of the intracellular domain, and a G-protein joined to the linker. The G-protein fusion receptors of the invention are useful for identifying modulators of CaR, mGluR and GABABR for use in treating associated conditions. The present amino acid sequence was used in the production of the invention. (Updated on 29-AUG-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NRERIGODSAYEOEGKVOFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RISCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel G-protein fusion receptor, useful for identifying modulators of CaR, mGluR and GABABR, comprises G-protein joined to the intracellular domain of the receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAVTIIPKRMSVRGFDRYFSSRTIDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHVKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96.7%; Score 3004.5; DB 5; Length 96.7%; Pred. No. 6e-303; Live 6; Mismatches 12; Indels
                                                                                                                                                                                                                                                                                          Human, G-protein fusion receptor; extracellular domain; transmembrane domain; intracellular domain; CaR; mGluR; modulator identification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Buaby
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Storjohann LL,
                                  Ė
                                                                                                                                                                                                                                             Human ph8SPmGluR4 chimeric protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure; Fig 16; 168pp; English.
                               AAO15101 standard; protein; 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                03-OCT-2001; 2001WO-US031074.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          03-OCT-2000; 2000US-00679664.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Stormann T, Hammerland LG, Simin RT;
                                                                                                                                                        (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 564; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (NPSP-) NPS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2002-330170/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 909 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200229033-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens.
                                                                                                                                                     29-AUG-2003
22-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11-APR-2002
                                                                                            AA015101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        182
AA015101

AA0151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
```

Garrett

JG,

GABABR

386

61

Gaps

۲,

Length 909;

446

626

241

RESULT

ø

```
WPI; 1995-302715/39.
      N-PSDB; AAT03888
                                                                                                  Sequence 912 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-SEP-2002
                                                                                                                                                          330
                                                                                                                                                                        62
                                                                                                                                                                                                                                182
                                                                                                                                                                                                                                             510
                                                                                                                                                                                                                                                            242
                                                                                                                                                                                                                                                                                        302
                                                                                                                                                                                                                                                                                                     630
                                                                                                                                                                                                                                                                                                                                                422
                                                                                                                                                                                                                                                                                                                                                              750
                                                                                                                                                                                                                                                                                                                                                                            482
                                                                                                                                                                                                                                                                                                                                                                                                        542
                                                                                                                                                                                                                                                                                                                                                                                                                     870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAE23757
                                                                                                                Query Match
                                                                                    mGluR4
                                                                                                                        Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAE23757
IID AAE2
XX
AC AAE2
XX
XX
DT 10-8
XX
XX
Hume
KW Hume
                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 8
셤
                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                       셤
                                                                                                                                                                       ò
                                                                                                                                                                                    요
                                                                                                                                                                                                               셤
                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                           쉽
                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                            ò
                                                                                                                                                                                                   ò
                     989
                                   421
                                                               481
                                                                             806
                                                                                                         998
       361
               LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGHOMSISYAALLTKTNRIYRIFEQGKRSVS
                                          LAGI FLCYATTFLMI AEPDLGTCSLRRI FLGLGMSI SYAALLTKTNRI YRI FEQGKRSVS
                                   APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS
                                                               DISLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                        DLSLICLIGYSMLLMYTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                                            QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM
                                                                                                                                                                                                                                Metabotropic glutamate receptor 4; mGluR4; stroke; epilepsy; Alzheimer disease; detection; diagnosis; therapy.
                                                                                                                       SNKFTQKGNFRENGEAKSELCENLETPALATKQTYVTYTNHAI 584
                                                                                                                                                                                                                                                                                                                                                                                                        823. .847
/label= TMD-VII
/note= "transmembrane domain VII"
                                                                                                                                                                                                                                                                                                                                   domain III
                                                                                                                                                                                                                                                                                                                                                        domain IV"
                                                                                                                                                                                                                                                                                                                                                                                                  domain VI"
                                                                                                                                                                                                                                                                                                             domain II'
                                                                                                                                                                                                                                                                                        domain I"
                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                             'note= "transmembrane domain
                                                                                                                                                                                                                                                                          588. .610
/label= TWD-I
/note= "transmembrane d
625. .645
/label= TMD-II
/note= "transmembrane d
57. .675
/label= TMD-III
                                                                                                                                                                                                                                                                                                                                                      /note= "transmembrane
751. .771
/label= TMD-V
                                                                                                                                                                                                                                                                                                                                                                                   /186. .807
|Jabel= TMD-VI
/note= "transmembrane
                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                        AAR82658 standard; protein; 912 AA
                                                                                                                                                                                                                                                                                                                                                'label= TMD-IV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 95WO-GB000356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94GB-00003285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      94GB-00015532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (WELL ) WELLCOME FOUND LID.
                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                   Human mGluR4
                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9522609-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21-FEB-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-AUG-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-FEB-1994;
                                                                                                                                                                                                     20-DEC-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                   24-AUG-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Makoff AJ;
       302
                     627
                                    362
                                                  687
                                                               422
                                                                              747
                                                                                            482
                                                                                                         807
                                                                                                                        542
                                                                                                                                     867
                                                                                                                                                                                       AAR82658;
                                                                                                                                                                                                                                                                    Key
Domain
                                                                                                                                                                                                                                                                                                                     Domain
                                                                                                                                                                                                                                                                                                                                                                                    Domain
                                                                                                                                                                                                                                                                                                                                                                                                          Domain
                                                                                                                                                                                                                                                                                                Domain
                                                                                                                                                                                                                                                                                                                                          Domain
                                                                                                                                                                                                                                                                                                                                                               Domain
                                                                                                                                                                  AAR82658
                    a
                                   ઠે
                                             q
                                                            ò
                                                                           셤
                                                                                          ò
                                                                                                      g
                                                                                                                       ઠે
                                                                                                                                    원
```

```
449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             810 QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIIIFHPEQNVPKRKRSLKAVVTAATM 869
                                                                                                                                                                                                                                                                                                                                                                                               389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                        121
    for detection,
                                                                                                                            mRNA from the human cerebellum was used to construct a cDNA library. cDNP was amplified by PCR primers (AAT03896-97) based on rat mGluR4 sequences and with the primers given in AAT03898-99 to obtain cDNA encoding human
                                                                                                                                                                                                                                                                                                                                                                            GSGQQLPRSICSLPCQPGERKKTVKGMPCCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RISCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QSADKLY1QTTTLTVSVSLSASVSLGMLYMPKVYIILPHPEQNVPKRKRSLKAVVTAATM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DLSLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                                                                                          NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                         3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; metabotropic glutamate receptor; mGluR4; neurodegeneration; antipsychotic; anticonvulsant; analgesic; antidepressant; antiemetic.
                                                                                                                                                                                                                                                                                                                  Gaps
  used for de
receptors,
                                                                                                                                                                                                                                                                                                                1;
                                                                                                                                                                                                                                                                       Length 912;
                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SNKFTOKGNFR PNGEAKSELCENLEAPALATKOTYVTYTNHAI 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SNKFTQKGNFRPNGEAKSELCENLETPALATKQTYVTYTMAI 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human metabotropic glutamate (mGluR4) receptor protein.
New isolated human metabotropic glutamate receptors - diagnosis and therapy of diseases associated with the stroke, epilepsy and Alzheimer's disease.
                                                                                                                                                                                                                                                                     96.7%; Score 3004.5; DB 2;
1larity 96.7%; Pred. No. 6e-303;
Conservative 6; Mismatches 12; I
                                                                                       Claim 2; Page 40-43; 55pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ż
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAE23757 standard; protein; 912
                                                                                                                                                                                                                                                                                           Local Similarity
nes 564; Conserv
```

```
ABP81846;
                                             542
                                                                                                                                                       RESULT 9

ABPR 1846

AND ABR 1846

AND ABR 1846

BE WELL OF 14-14

AND ABR 1846

AND A
  용
                                             ò
                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention relates to human metabotropic glutamate receptor (mGluR4) proteins and polynucleotides encoding such proteins. MGluR4 sequences of the invention are useful for treating acute and chronic neurodegeneration. They are also used as antipsychotic, anticonvulsant, analgesic, antidepressant and antiemetic agents. They are also useful for the diagnosis and/or treatment of conditions associated with an excess or deficiency of mGluR4. The present sequence is human mGluR4 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  689
                                                                                                                                                                                                                                                                                                                                                                                                                    New nucleic acid encoding human metabotropic glutamate receptor, useful e.g. in screening for specific agonists and antagonists for treating e.g. neurodegeneration.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APRFISPASQLAITFSLISLQLLGICWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QSADKLY1QTTTLTVSVSLSASVSLGMLYMPKVYI1LFHPEQNVPKRKRSLKAVVTAATM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                330 GAVIILPKRMSVRGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHVKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 510 GSGQQLPRSICSLPCQPGERKKTVKGMPCCWHCEPCTGYQYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                362 APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DLSLICLLGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAPIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NRERI GODSAYEQEGKVQFVI DAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       390 NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            450 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNDSAEYKVIGSWTDHLHLRIERMHWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCBPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RTSCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DISLICLIGYSMILMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 5; Length 912;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               96.7%; Score 3004.5; DB 5; llarity 96.7%; Pred. No. 6e-303; Conservative 6; Mismatches 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 1; Col 9-16; 35pp; English.
                                                                                                                                                       18-AUG-2000; 2000US-00641318.
                                                                                                                                                                                              96US-0013189P.
97US-00816178.
                                                                                                                                                                                                                                                                                                                                                                           N-PSDB; AAD38024, AAD38025.
                                                                                                                                                                                                                                                                 (ELIL ) LILLY & CO ELI.
                                                                                                                                                                                                                                                                                                             Wu S;
                                                                                                                                                                                                                                                                                                                                                    WPI; 2002-442818/47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 912 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Simil
Matches 564; (
                      Homo sapiens
                                                                US6384205-B1
                                                                                                                                                                                                 12-MAR-1996;
                                                                                                                                                                                                                     12-MAR-1997;
                                                                                                                                                                                                                                                                                                          Belagaje RM,
                                                                                                            07-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          182
```

a

ò a δ 셤 δ a δ 유 ઠે

셤 ઠે g

ò

```
The present invention describes antigenic peptides (I) comprising: (a) any one of 1601 sequences (see ABP82019 to ABP83619) of 12-24 amino acids. Also described: (1) an assay for the detection of a particular G protein-coupled receptor (GPCR) or a candidate polypeptide in a sample; and (2) an isolated antibody having high specificity and high affinity or avidity for a particular GPCR. (I) can be used as GPCR modulators and in artibody against a particular GPCR. and in the production of specific antibody against a particular GPCR. and in the production of specific antibody against a particular GPCR. and in the production of specific antibody against a particular GPCR. and in the production of specific antibodies. The peptides and antibodies are also useful for detecting the GPCRs and antibodies are useful for diagnosing and designing drugs for creating immune-related disease, is growth-related disease, cell creating immune-talted disease, immunological-related cell proliferative resented disease, immunological-related cell proliferative disease, or autoimmune diseases, e.g. AIDS, Alzheimer's disease, cell atherosclerosis, bacterial, fungal, protectosan or viral infections, atherosclerosis, partingen's disease, multiple aclerosis, pain, psoriasis, anxiety, depression, schizophrenia, dementia, mental retardation, memory loss, epilepsy, asthma, tuberculosis, obesity, nausea, hypertension,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alzheimer's disease; atherosclerosis; infection; osteoarchritis; allergy; osteoporosis; cardiomyopathy; inflammation; orteoarchritis; allergy; graft versus host disease; Parkinson's disease; disease; disease; psoriasis; anxiety; depression; schizophrenia; dementia; memory loss; mental retardation; epilepsy; asthma; tuberculosis; obesity; nausea; hypertension; hypotension; renal disorder; rheumatoid arthritis; trauma; ulcer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New isolated antigenic peptides e.g., for G protein-coupled receptors (GPCR), useful for diagnosing and designing drugs for treating conditions in which GPCRs are involved, e.g. AIDS, Alzheimer's disease, cancer or
810 OSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM 869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              G protein-coupled receptor; GPCR; antigenic peptide; gene therapy; G protein-coupled receptor medulator; antibody; immune-related disease; growth-related disease; cell regeneration-related disease; limmunological-related cell proliferative disease; autoimmune disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human metabotropic glutamate receptor 4 protein SEQ ID NO:176.
                                                                                                                                                  SNKFTOKGNFRPNGEAKSELCENLEAPALATKOTYVTYTNHAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABP81846 standard; protein; 912 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure, Fig 1, 523pp, English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (LIFE-) LIFESPAN BIOSCIENCES INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Brown JP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-DEC-2001; 2001WO-US050107.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19-DEC-2000; 2000US-0257144P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Burmer GC, Roush CL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2003-046718/04.
N-PSDB; ABZ42692.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      autoimmune diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200261087-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  04-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             08-AUG-2002.
```

```
182 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  570
                                                                               Woolf C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 242
 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                        1;
                                                                                                                                                                                                                                                                   629
                                                                                                                                                                                                                                                                                                      689
                                                                                                                                                                                                                                                                                                                                        749
                                                                                                                                                                                                                                                                                                                                                                           809
                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                             869
                                                                                                                          389
                                                                                                                                                            449
                                                                                                                                                                                               509
                                                                                                                                                                                                                241
                                                                                                                                                                                                                                  569
                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                          121
                                                                                                                                                                             181
                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                       421
                                                                                                         61
hypotension, renal disorders, rheumatoid arthritis, trauma, ulcers, or any other disorder in which GPCRs are involved. The antibodies may be used in immunoassays and immunodisgnosis. ABZ42523 to ABZ42869 encode GPCR proteins given in ABPB1675 to ABP82018, which are used in the exemplification of the present invention
                                                                                                                                                                                                                        510 GSGQQLPRSICSLPCQPGERKKTVKGMPCCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                           LAGIFLCYATTFLMIAEPDLGTCSLRRIFLCHOOLGTSYAALLTKTNRIYRIFFGGKRSVS
                                                                                                                                                                                                                                                                                                                               QSADKLY1QTTTLTVSVSLSASVSLGMLYMPKVY11LFHPEQNVPKRKRSLKAVVTAATM
                                                                                                                                                                                                                                                                                                                                                                                                    3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                  NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                    390 NRERIGQDSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDFVDGTQLLKY
                                                                                                                                                                             122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP
                                                                                                                                                                                        450 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNDSAEYKVIGSWTDHLHLRIERMHWP
                                                                                                                                                                                                                GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                   RISCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL
                                                                                                                                                                                                                                                                                     LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVS
                                                                                                                                                                                                                                                                                                                      APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS
                                                                                                                                                                                                                                                                                                                                                         DESLICELGYSMELMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            pain; neuronal tissue; gene therapy; segmental nerve injury; chronic constriction injury; CCI; nerve injury; SNI; Chung.
                                                                                        1;
                                                                      DB 6; Length 912;
                                                                                        12; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                       SNKFTOKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI 584
                                                                     Score 3004.5; DB Pred. No. 6e-303;
                                                                                       6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human Protein Q14833, SEQ ID NO 4041.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADE58170 standard; protein; 912
                                                                    96.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                       Matches 564; Conservative
                                                                       Query Match
Best Local Similarity
                                                     Sequence 912 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO2003016475-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                              810
                                                                                                                                          62
                                                                                                                                                                                                                                                                                     302
                                                                                                                                                                                                                182
                                                                                                                                                                                                                                                   242
                                                                                                                                                                                                                                                                                                                                                                                            482
                                                                                                                                                                                                                                                                                                                                                                                                                               542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADE58170;
                                                                                                                                                                                                                                                                                                                                                          422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  spared
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       spinal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                    ద
                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
   ឧស្សប្បវុទ្ធ
                                                                                                         ò
                                                                                                                         셤
                                                                                                                                         ઠે
                                                                                                                                                         윱
                                                                                                                                                                            ò
                                                                                                                                                                                          셤
                                                                                                                                                                                                           ò
                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                            ઠે
```

```
The invention discloses a composition comprising two or more isolated rat or human polynucleotides or a polynucleotide which represents a fragment, derivative or allelic variation of the nucleic acid sequence. Also claimed are a vector comprising the movel polynucleotide, a host cell comprising the vector, a method for identifying a nucleotide sequence which is differentially regulated in an animal subjected to pain and a array, a method for identifying an agent that increases or decreases the expression of the polynucleotide sequence that is differentially expressed in neuronal tissue of a first animal subjected to pain, a method for identifying a compound which regulates the expression of a polynucleotide sequence which is differentially compound that regulates the activity of one or more of the compound that regulates the activity of one or more of the compound that regulates the activity of one or more of the compound for identifying a compound or small molecule that regulates the activity of one or more of the compound for identifying a compound useful in treating specification, a method for identifying a compound useful in treating compound that regulates its activity is useful for preparing a medicament for treating complypeptides or their antibodies. The polymucleotide or the compound that modulates its activity is useful for preparing a medicament for treating complypeptides or their antibodies. The polymucleotide or the compound that modulates its activity is useful for preparing a medicament for treating complypeptides or their antibodies. The polymucleotide or the compound that modulates its activity is useful for preparing a medicament for treating complypeptides or their antibodies. The polymucleotide or the compound that modulates its activity is useful for preparing a medicament for treating comply injury (CCI) and spared nerve injury (SNI) in an animal (e.g. spin) etc. The sequence data for this patent did not form part of the profice or the compound that specification, but was obtained in elec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New composition comprising two or more isolated polypeptides, useful for preparing a medicament for treating pain in an animal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NRERIGODSAYEQEĞKVOFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 96.7%; Score 3004.5; DB 7; Length 912; 96.7%; Pred. No. 6e-303;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. 6e-303;
5; Mismatches 1
                                                                                                                                                                                                                                                                                                                              Costigan M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                      Befort K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 1; Page; 1017pp; English.
                                                                    14-AUG-2001; 2001US-0312147P.
01-NOV-2001; 2001US-0346382P.
26-NOV-2001; 2001US-0333347P.
14-AUG-2002; 2002WO-US025765
                                                                                                                                                                                                                    (GEHO ) GEN HOSPITAL CORP.
(FARB ) BAYER AG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 96.7
Matches 564; Conservative
                                                                                                                                                                                                                                                                                                                                  D'urso D,
                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2003-268312/26.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 912 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                            GENBANK; 014833.
```

```
RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AD029094
   $$$$$$$$$$$$$$$$$$$$
                                                                                                                                                                                                                                          ઠ
                                                                                                                                                                                                                                                           පු
                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   è
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   . 요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention discloses a composition comprising two or more isolated rat or human polynuclectides or a polynuclectide which represents a fragment, derivative or allelic variation of the nucleic acid sequence. Also claimed are a vector comprising the novel polynuclectide, a host cell comprising the vector, a method for identifying a nucleotide sequence which is differentially regulated in an animal subjected to pain and a kit to perform the method, an array, a method for identifying an agent that increases or decreases the expression of the polynucleotide sequence that is differentially expressed in neuronal tissue of a first animal subjected to pain, a method for identifying a compound which regulates the expression of a polynucleotide sequence which is differentially expressed in the administration of a polynucleotide sequence which is differentially expressed in an animal subjected to pain, a method for identifying a compound that regulates the activity of one or more of the
                         689
                                                                   749
                                                                                                                                                            869
   361
                                               421
                                                                                          481
                                                                                                                809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New composition comprising two or more isolated polypeptides, useful for preparing a medicament for treating pain in an animal.
QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM
                                                                                                                                     QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM
                                             APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS
                                                                                        DISLICLIGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAPIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                 spinal segmental nerve injury; chronic constriction injury; CCI; spared nerve injury; SNI; Chung.
                                                                                                                                                                                SNKFTQKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI
                                                                                                                                                                                               SNKFTQKGNFRPNGEAKSELCENLEAPALATKQTYVTYTNHAI
                                                                                                                                                                                                                                                                                                                                                    pain; neuronal tissue; gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Costigan M;
                                                                                                                                                                                                                                                                                                                                Human Protein Q14833, SEQ ID NO 4037
                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                              ADE58166 standard; protein; 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Befort K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 1; Page, 1017pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14-AUG-2001; 2001US-0312147P.
01-NOV-2001; 2001US-0346382P.
26-NOV-2001; 2001US-0333347P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14-AUG-2002; 2002WO-US025765
                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GEN HOSPITAL CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       D'urso D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2003-268312/26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENBANK; Q14833.
                                                                                                                                                                                                                                                                                                                                                                                                                        WO2003016475-A2
                                                                                                                                                                                                                                                                                                                                                                                                    sapiens
                                                                                                                                                                                                                                                                                                         29-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                              27-FEB-2003
                                                                  069
                                                                                                                                                           810
                       630
                                                                                          422
                                                                                                               750
                                                                                                                                     482
                                                                                                                                                                                 542
  302
                                             362
                                                                                                                                                                                                     870
                                                                                                                                                                                                                                                                                    ADE58166;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Woolf C,
                                                                                                                                                                                                                                                                                                                                                        Human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (GEHO
(FARB
                                                                                                                                                                                                                                      Homo
                                                                 셤
                                                                                        ઠ
                                                                                                               셤
                                                                                                                                                         유
                      셤
                                             ò
                                                                                                                                    δ
                                                                                                                                                                                                    셤
                                                                                                                                                                                ò
```

```
polynucleotides, a method for producing a pharmaceutical composition, a method for identifying a compound or small molecule that regulates the activity in an animal of one or more of the polygeptides given in the paperification, a method for identifying a compound useful in treating pain and a pharmaceutical composition comprising the one or more polypeptides or their antibodies. The polynucleotide or the compound that molympaptides or their antibodies. The polynucleotide or the compound that molympaptides or their antibodies. The polynucleotide or the compound that moliury (CCI) and spared nerve injury (Chung), chronic constriction injury (CCI) and spared nerve injury (SNI)) in an animal (e.g. gene injury (CCI) and spared nerve injury (SNI)) in an animal (e.g. gene the sequence presented is a human protein (shown in Table 2 of the specification) which is differentially expressed during pain. Note:
The sequence data for this patent did not form part of the printed specification, but was obtained in electronic form directly from WIPO at the wipolished_pot_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APRFISPASQLAITFSLISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS 749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QSADKIYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM 969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IRNVNFSGIAGNPVTENENGDAFGRYDIYOYQLRNGSAEYKVIGSWTDHLHLRIERMQWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAVTILPKRMSVRGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHVKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        510 GSGQQLPRSICSLPCQPGERKKTVKGMPCCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RTSCQP1P1VKLEWDSPWAVLPLFLAVVG1AATLFVVVTFVRYNDTP1VKASGRELSYVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     390 NRERIGQDSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       450 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNDSABYKVIGSWTDHLHLRIERMHWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DISLICLIGYSMILMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 7; Length 912;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   G protein-coupled receptor; GPCR; drug screening; diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       96.7%; Score 3004.5; DB 7; Length 96.7%; Pred. No. 6e-303; ive 6; Mismatches 12; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SNKFTOKGNFRPNGEAKSELCENLETPALATKOTYVTYTNHAI 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SNKFTQKGNFRPNGEAKSELCENLBAPALATKQTYVTYTNHAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human novel GPCR GRM4, SEQ ID NO:193.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AD029094 standard; protein; 912 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-JUL-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 96.7
Matches 564; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 912 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AD029094;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 870
```

Sequence 912 AA;

transgenic mouse; neurological disorder; adrenal gland disorder; colon disorder; intestinal disorder; cardiovascular disorder; intestinal disorder; cardiovascular disorder; intestinal disorder; disorder; disorder; disorder; disorder; disorder; disorder; muritive disorder; cancer; kidney disorder; uterus disorder; nutritive disorder; testis disorder; ovary disorder; stomach disorder; pancrasa disorder; spleen disorder; thymus disorder; thyroid disorder; antiparkinsonian; antimanic; cytostatic; antiinflammatory; vasotropic; antianginal; antiarrhythmic; CNS; central nervous system; respiratory; antidarrhoeic; antidiabetic; dermacological; antibacterial; antianemic; antiseborrhoeic; dermacological; antilucer; antithyroid; antiallergic; anorectic; immunosuppressive; nephrotropic; gene therapy; GPCR modulator; human; Li F; Zeng H; Gaitanaris GA, Bergmann JE, Gragerov A, Hohmann J, Madisen L, Mcilwain KL, Pavlova MN, Vassilatis D, pectoris, Parkinson's disease. 09-SEP-2003; 2003WO-US028226. 09-SEP-2002; 2002US-0409303P. 2004-390329/36. (PRIM-) PRIMAL INC. N-PSDB; ADO29776 WO20040400000-A2 Homo sapiens Madisen L, 13-MAY-2004 receptor

Novel mammalian G protein coupled receptors, useful for identifying compounds that modulates diagnosing and treating disease condition associated with GPCR dysfunction e.g. autoimmune diseases, angina

Claim 1; SEQ ID NO 193; 542pp; English.

The invention relates to human and mouse G protein-coupled receptors (GPCRs) and nucleic acids encoding them. The invention also relates to GPCRs) and nucleic acids encoding them. The invention also relates to sequences at least 9% identical to the GPCR proteins and nucleic acids of the invention; methods of screening for associated with GPCRs of the invention; methods of screening for compounds useful in the treatment of GPCR related diseases; a transgenic compounds useful in the treatment of GPCR related diseases; a transgenic compounds useful in the treatment of GPCR related diseases; a transgenic compound in a GPCR gene of the invention; and with comptising a GPCR gene of the invention; and with a comprising a GPCR polymelectides of the invention. The invention further discloses variants of the GPCR polypeptides and vectors comprising a GPCR uncleic acids and proteins may comparising agreement of GPCR polymelectides of the invention. The invention further discloses variants of the GPCR polypeptides and vectors comprising agreement of comprisions and vectors comprisions and including neurological disorders (e.g., Alzheimer's disease, disorders of the adrenal gland; disorders (e.g., Alzheimer's disease, conflowascular disorders of the colon or intestine of syndrome); cardiovascular disorders (e.g., autoimmune disorders or mycoardial infarction); muscular disorders (e.g., autoimmune disorders (e.g., anaemia or leukaemia); immune disorders (e.g., autoimmune disorders (e.g., antoimmune and joint disorders (e.g., autoimmune disorders (e.g., arthritis, gout or osteoporosis); metabolic or nutritive disorders or christiated or therefore or seteoporosis); metabolic or nutritive disorders (e.g., obesity, enzyme deficiency-related diseases or vitamin deficiency-related fuerus, prostate per present sequence are pobtained in controlic format directly from WIDS) patent electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences

```
449
                                                                                                                                                        509
                                                                                                                                                                                                                                                                                          689
                                                                 389
                                                                                                                                                                                241
                                                                                                                                                                                                     569
                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                               629
                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                      749
                                                                                                                                                                                                                                                                                                                                                                                 803
                                                                                                                                                                                                                                                                                                                                                                                                          541
                                                                                        121
                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                              810 QSADKLYIQTTILTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM 869
                                            61
                                                        GSGQQLPRSICSLPCQPGBRKKTVKGMACCWHCBPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                           510 GSGQQLPRSICSLPCQPGERKKTVKGMPCCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                           242 RISCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL
                                                                                                                                                                                                                                     LAGIFLCYATTPLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVS
                                                                                                                                                                                                                                                                                                                                                                                                         QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM
                                                                                        62 NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                              390 NRERIGODSAYEQEGKVOFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                     122 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP
                                                                                                                                                                                                                                                                                                                                                            DISLICLIGYSMLIMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                            3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       urological disorder; uropathic; cytostatic; urinary incontinence;
                       ä
 Length 912;
                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human urological disorder related protein 115 SEQ:66.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      SNKFTQKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI
  DB 8;
                      12;
Score 3004.5; DB
Pred. No. 6e-303;
6; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    benign prostatic hyperplasia; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADQ89114 standard; protein; 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15-JAN-2003; 2003US-0440318P.
04-FEB-2003; 2003US-0444783P.
27-MAR-2003; 2003US-0457901P.
08-MAY-2003; 2003US-0468775P.
19-MAY-2003; 2003US-0471614P.
 96.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14-JAN-2004; 2004WO-US000750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21-OCT-2004 (first entry)
                       Conservative
  Query Match
Best Local Similarity
Matches 564; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO2004065576-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-AUG-2004
                                                                                                                                                                                                                                                                       302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADQ89114;
                                                                                                                                                                                                                                                                                                                                                               422
                                                                                                                                                                                182
                                                                                                                                                                                                                                                                                                                                                                                                          482
                                                                                                                                                                                                                                                                                                                                                                                                                                                      542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                               유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                요
                                                                                        ò
                                                                                                             셤
                                                                                                                                     ò
                                                                                                                                                       셤
                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                            ò
```

us-10-828-332-7.rag

```
Human metabotropic glutamate receptor sub-type(s), esp. 4, 6 and 7 - also corresp. DNA and antibodies, useful for identifying cpds. which modulate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human metabotropic glutamate receptor subtype 4 (hmGluR4) cDNA clones were isolated from a cerebellum cDNA library using a rat mGluR4 probe. Clone cmR20 lacked the 5' end of the hmGluR4 gene. PCR using human genomic or brain cDNA as template was used to obtain a complete gene sequence (given in AAQ89342) encoding hmGluR4 (AAR72092). Recombinant hmGluR4 was produced in mammalian cells. (Updated on 25-MAR-2003 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAVTILPKRMSVRGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHVKKCT
                                 QSADKLYIQTTLLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      390 NRERIGQDSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   450 IRNVNPSGIAGNPVTFNENGDAPGRYDIYQYQLRNDSAEYKVIGSWTDHLHLRIERMHWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GVSSSLPTRMT-SGFDRYPSSRTLDNNRRNIWPABFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              metabotropic glutamate receptor subtype 4; mGluR4; hmGluR4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 912;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indela
                                                                                                                                         584
                                                                                                                                                                                            912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Knoepfel
                                                                                                                                                                        870 SNKFTQKGNFRPNGEAKSELCENLEAPALATKQTYVTYTNHAI
                                                                                                                                         SNKFTOKGNFRPNGEAKSELCENLETPALATKOTYVTYTNHAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 3001.5; DB 2
Pred. No. 1.2e-302;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Puettner I,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 2; Page 44-48; 110pp; English.
                                                                                                                                                                                                                                                                                                                                Ź
                                                                                                                                                                                                                                                                                                                             AAR72092 standard; protein; 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Lindauer K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             93EP-00810663.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          signal transduction activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          96.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          94WO-EP002991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               563; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                       (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (CIBA ) CIBA GEIGY AG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1995-139596/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     transducer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Flor PJ, Kuhn R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB; AAQ89342.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 912 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          07-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19-AUG-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO9508627-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                       25-MAR-2003
26-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human mGluR4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-MAR-1995.
                                                                                                                                                                                                                                                                                                                                                                                     AAR72092;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       330
                                 482
                                                                                                                                         542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human
                                                                                                                                                                                                                                                                                                 AAR72092

110

AAR72092

AAR7

                                                                         셤
                                                                                                                                         δ
                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         名
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                urclogical disorders for identifying a compound capable of treating a urclogical disorder, identifying a subject having a urclogical disorder, or treating a subject having a urclogical disorder, as treating a subject having a urclogical disorder, as the compound capable of treating a urclogical disorder; (2) a method for identifying a subject having a urclogical disorder; and (3) a method for treating a subject having a urclogical disorder; and (3) a method for treating a subject having a urclogical disorder; and (3) a method for treating a subject having a urclogical compound capable of treating a urclogical disorder are useful for identifying a compound capable of treating a urclogical disorder, identifying a subject having a urclogical disorder, or treating a subject having a urclogical disorder, incentifying a subject having a urclogical disorder, or treating a subject having a urclogical disorder include urlnary incontinence and benign prostatic hyperplasta. The present sequence represents a human urclogical disorder related protein, which is used in the exemplification of the present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NRERIGQDSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                   Use of polypeptides related to urological disorders, e.g. 44390, 54181, 211 or for identifying a compound capable of treating a urological disorder or identifying and treating a subject having a urological
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              750 DLSLICLLGYSMLLMYTCTVYAIKTRGVPETFNBAKPIGFTMYTTCIVMLAFIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   510 GSGQQLPRSICSLPCQPGERKKTVKGMPCCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RTSCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   330 GAVIILPKRMSVRGFDRYFSSRTLDNNRRINIWFAEFWEDNFHCKLSRHALKKGSHVKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RIGCRPIPIIKLEWGSPWAVLPLFLAVVGIAATLFVVITFVRYNDTPIVKASGRELSYVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTWRIYRIFEQGKRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DISLICLIGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVMLAFIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 390 NRERIGODSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  present invention describes the use of polypeptides related to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 912;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 3004.5; DB 8;
Pred. No. 6e-303;
6; Mismatches 12; I:
                                                                                                                                                                                                                     SD;
                                                                                                                                                                                                                     Eliasof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 1; SEQ ID NO 66; 542pp; English.
                                                                                                                                                                                                                        'n
2003US-0478742P.
2003US-0488529P.
2003US-0491156P.
2003US-0499594P.
                                                                                                                                                                                                                  Karicheti V, Silos-Santiago
                                                                                                                                                                (MILL-) MILLENNIUM PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 96.7
Matches 564; Conservative
                                                                                                                                                                                                                                                                          2004-562167/54.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                       WPI; 2004-562167,
N-PSDB; ADQ89113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 912 AA;
                                                     30-JUL-2003;
02-SEP-2003;
26-SEP-2003;
  16-JUN-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .nvention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          630
                                                                                                                                                                                                                                                                                                                                                                                                                                       disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               182
```

g

δ

요

ò

셤

ઠે 셤 δ 셤 ઠે 셤

ઠે

g

ઠે

ઠે

```
689
                                                                                                                                                                         749
                                                                                                                                                                                                                           809
                                                                                                                                                                                                                                                                          869
241
                       569
                                              301
                                                                       629
                                                                                                361
                                                                                                                                                  421
                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New 1995 cDNA, useful for treating osteoporosis, neurological diseases, Alzheimer's diseases, Parkinson's diseases, dementia and various cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human; oligo-capping method; diagnostic marker; gene therapy; osteoporosis; neurological disease; Alzheimer's disease; parkinson's disease; dementia; short memory; cancer; sense or mctor function; emotional reaction; fear response; panic; osteopathic; neuroprotective; nootropic; antiparkinsonian; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This invention relates to novel, isolated full length human cDNA molecules and the encoded proteins thereof. Specifically, it refers to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ë
                                                                                               GSGQQLPRSICSLPCQPGERKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
              GSGQQLPRSICSLPCQPGBRKKTVKGMPCCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                              RTSCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL
                                                             APRFISPASQLAITFILISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDIS
                                                                                                                                                               APRFISPASQLAITFSLISLQLLGICVWFVVDPSHSVVDFQDQRTLDPRFARGVLKCDMS
                                                                                                                                                                                                 DLSLICLLGYSMLLMYTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVMLAFIPIFFGTS
                                                                                                                                                                                                                DLSLICLIGYSMLLMVTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVWLAFIPIFFGTS
                                                                                                                                                                                                                                                   OSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM
                                                                                                                                                                                                                                                                           QSADKLYIQTTTLTVSVSLSASVSLGMLYMPKVYIILFHPEQNVPKRKRSLKAVVTAATM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Otsuki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human protein useful for treating neurological disease Seq 2129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sugiyama T,
                                                                                                                                                                                                                                                                                                                  SNKFTQKGNFRPNGEAKSELCENLEAPALATKQTYVTYTNHAI 912
                                                                                                                                                                                                                                                                                                    SNKFTQKGNFRPNGEAKSELCENLETPALATKQTYVTYTNHAI 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             T, Isono Y,
Irie R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; SEQ ID NO 2129; 2686pp; English.
                                                                                                                                                                                                                                                                                                                                                                                          Ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nishikawa
Nagai K,
                                                                                                                                                                                                                                                                                                                                                                                          ADR08623 standard; protein; 591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (REAS-) RES ASSOC BIOTECHNOLOGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14-FEB-2003; 2003JP-00102207.
09-MAY-2003; 2003JP-00131452.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12-FEB-2004; 2004EP-00003145.
                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              , s,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2004-583265/57.
N-PSDB; ADR06667.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Isogai T, Yamamoto
Wakamatsu A, Ishii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tranquiliser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EP1447413-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                          04-NOV-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18-AUG-2004
                                                                                                                                                                                                                                                                                                                                                                                                                   ADR08623;
182
                       510
                                                242
                                                                         570
                                                                                                302
                                                                                                                         630
                                                                                                                                                  362
                                                                                                                                                                         690
                                                                                                                                                                                                  422
                                                                                                                                                                                                                           750
                                                                                                                                                                                                                                                   482
                                                                                                                                                                                                                                                                            810
                                                                                                                                                                                                                                                                                                     542
                                                                                                                                                                                                                                                                                                                           870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ношо
                                                                                                                                                                                                                                                                                                                                                                  RESULT 15
                                                                                                                                                                                                                                                                                                                                                                             요
                                              ઠે
                                                               음 강
                                                                                                                 셤
                                                                                                                                                ઠે
                                                                                                                                                                    요
                                                                                                                                                                                          ò
                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                         셤
ઠે
```

```
constraints obtained by an oligo-capping method, where none of these clones are identical to any known human mRNAs. The present invention describes an immunosassay to identify agonists and antegonists, as well as antibodies, antibodies, antibodies, antisones molecules and siRNAs that can all be used to bind con and modulate expression of the CDNA molecules. As such, these conclexites are useful for diagnostic markers or therapeutic targets for the various diseases or morbid states. In particular, they are useful in gene therapy for treating osteoporosis, neurological disease, Alzheimer's disease, Parkinson's disease, dementia, short memory and various cancers, as well as for maintening equilibrium of sense or motor function, and for treating emotional reaction, fear response and panic. Accordingly, they exhibit osteopathic, neuroprotective, nootropic, antiparkinsonian, cytostatic and tranquiliser activities. This sequence is not given in the sequence of the invention. NOTE: This sequence is not given in the sequence listing of the specification but can be obtained on CD-ROM from the Buropean Patent Office, Vienna Sub-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         561
                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                321
                                                                                                                                                                                                                                                                                                                                                                                                                        81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  502 QSADKLYIQTTTLITVSVSLSASVSLGMLYMPKVYIILFHPBQNVPKRKRSLKAVVTAATM
                                                                                                                                                                                                                                                                                                                                                                                                              GAVTILPKRMSVRGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHVKKCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNGSAEYKVIGSWTDHLHLRIERMQWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      142 IRNVNFSGIAGNPVTFNENGDAPGRYDIYQYQLRNDSAEYKVIGSWTDHLHLRIERMHWP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RTSCOPIPIVKLEWDSPWAVLPLFLAVVGIAATLFVVVTFVRYNDTPIVKASGRELSYVL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LAGIFLCYATTFLMIAEPDLGTCSLRRIFLGLGMSISYAALLTKTNRIYRIFEQGKRSVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DESLICLIGYSMLLMYTCTVYAIKTRGVPETFNEAKPIGFTMYTTCIVMLAFIPIFFGTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NRERIGQDSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GSGQQLPRSICSLPCQPGERKKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRPTEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QSADKLY1QTTTLTVSVSLSASVSLGMLYMPKVY11LFHPEQNVPKRKRSLKAVVTAATM
                                                                                                                                                                                                                                                                                                                                                                                          GVSSSLPTRMT-SGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCT
                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                           1;
                                                                                                                                                                                                                                                                                                                              8; Length 591;
                                                                                                                                                                                                                                                                                                                                                           13; Indels
                                                                                                                                                                                                                                                                                                                          Score 2912.5; DB 8,
Pred. No. 1.2e-293;
8; Mismatches 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SNKFTOKGNFRPNGEAKSELCENLEAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SNKFTOKGNFRPNGEAKSELCENLETP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        completed: June 17, 2005, 18:14:23
                                                                                                                                                                                                                                                                                                                             93.7%;
                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 96.1
Matches 545; Conservative
                                                                                                                                                                                                                                                                                               Sequence 591 AA;
                                                                                                                                                                                                                                                                                                                                                                                            ო
                                                                                                                                                                                                                                                                                                                                                                                                                            22
                                                                                                                                                                                                                                                                                                                                                                                                                                                         62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          542
                                                                                                                                                                                                                                                                 office.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Search
Job tim
        88888888888888888888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                       유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
```

: 173 secs

time

Run

```
drosophila
apis mellif
apis mellif
                                                                               poephila gu
homo sapien
drosophila
                                                                                                                                                                                                                                                                                    homo sapien
apis mellif
homo sapien
homo sapien
                                                                                                                                                                                                                                                                                                                                                     gallus gall
gallus gall
rattus norv
                                          rattus norv
                                                      mus musculu
ictalurus p
                                                                                                                                                                                                      rattus norv
homo sapien
 poephila gu
homo sapien
                                                                                                                                                                                                                                   тив тивсиlи
                                                                                                                                                                                                                                              homo sapien
                                                                                                                                                                                                                                                            rattus norv
                                                                                                                                                                                                                                                                        homo sapien
                                                                                                                                                                                                                                                                                                                                          homo sapien
                                                                                                                                   drosophila
                                                                                                                       drosophila
                                                                                                                                                 drosophila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Interaction of the C-terminal tail region of the metabotropic glutamate receptor 7 with the protein kinase C substrate PICKI.";

Bur. J. Neurosci. 12:4215-4221(2000).

-I- FUNCTION: Receptor for glutamate. The activity of this receptor is mediated by a G-protein that inhibits adenylate cyclase activity.

-I- SUBUNIT: Interacts with PRKCABP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-JUL-1993 (Rel. 26, Created)
01-JUL-1993 (Rel. 26, Last sequence update)
25-OTT-2004 (Rel. 45, Last sequence update)
Metabotropic glutemate receptor 4 precursor (mGluR4).
Name=Grm4; Synonyms=Gprcld, Mglur4;
Rattus norvegicus (Rat).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             O'Hara P.J., Sheppard P.O., Thoegersen H., Venezia D., Haldeman B.A., MGGFane V., Housmed K.M., Thomene C., Gilbert T.L., Mulvihill B.R.; "The ligand-binding domain in metabotropic glutamate receptors is related to bacterial periplasmic binding proteins.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=20571397; PubMed=11122333;
El Far O., Airas J., Wischmeyer E., Nehring R.B., Karschin A.,
Betz H.;
           0015303
0086314
0086314
00966144
00966144
00966144
0096483
0096483
0096483
0096483
0096482
0096482
0096482
0011355
0011355
0011355
0096482
0011355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=921110002; PubMed=1309649;
Tanabe Y., Masu M., Ishii T., Shigemoto R., Nakanishi
"A family of metabotropic glutamate receptors.";
Neuron 8:169-179(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               912 AA
                                                                                                                                                                                                                                                                                                                                                                                                                         ALIGNMENTS
076MR0
MGRE HUMAN
MGRE RAT
086574
MGRE RAT
096F67
097667
097668
097403
097404
0750403
09750403
09750403
09750404
0750403
0975047
0750403
09750404
0750403
097738
MGR3 HUMAN
MGR3 HUMAN
MGR3 HUMAN
MGR3 HUMAN
                                                                                                                                                                                                                                                                                                                                                                   Q98UC5
MGR1_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=93332699; PubMed=8338667;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INTERACTION WITH PRKCABP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                         1212
1156
1188
1199
                          868
871
977
977
1520
1073
1073
1073
1264
1264
1264
1264
1264
872
873
873
873
                                                                                                                                                                                                                                                                                                   1040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Neuron 11:41-52(1993)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           [2]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
TISSUE=Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 1
MGR4 RAT
TD MGR4 RAT
70 P31423;
 2069.5
2026.5
2026.5
2026.5
1967.5
1285.5
1223.5
1223.5
1223.5
1223.5
1223.5
                                                                                                                                                                                                     1171.5
1155.5
1155.5
1155.5
1155.5
1150.5
1148.5
                                                                                                                                                                                        1179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Command line parameters:
-MODEL=frame+.n2P_model -DEV=xlp
-Q=(2002_1/USFTO_apool_p/US10828332/runat_17062005_171336_24951/app_query.fasta_1.1927
-Q=(2002_1/USFTO_apool_p/US10828332/runat_17062005_171336_24951/app_query.fasta_1.1927
-DB=UJ1APot -QFMT=fastan -SUFFIX=rup -MINMATCH=0.1 -LOOPCH=0 -LOOPEXT=0
-UNITS=bits -STAFT=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45
-DOCALIGN=200 -THR SCORE=pct -THR MAX=100 -THR MIN=0 -ALIGN=15 -MODE=LOCAL
-OUTFWT=pto -NORM=EXT -HEAPSIZE=500 -MINLEND -MAXLEN=2000000000
-USRR=US10828332_@CGN 1 1354 @runat_17062005_171336_24951 -NCPU=6 -ICPU=3
-NO MMAP -LARGEGUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DBV_TIMBOUT=120 -WARN TIMBOOT=30 -THREADS=1 -XGAPOP=10 -XGAPDEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mus musculu
homo sapien
mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sapien
sapien
sapien
rubrip
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           homo sapien
homo sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rattus norv
                                                                                        June 17, 2005, 18:19:18; Search time 315.5 Seconds (without alignments) 5696.982 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rattus norv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rattus norv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rattus norv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                          1 atgccaggggtatcatc......acaccaaccatgccatctag 1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       fugu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q14833
Q62216
Q68216
Q68216
Q00222
Q60964
P70579
P70579
Q14831
Q68ed2
Q68ed2
Q68ed2
Q68ed2
Q68ed2
Q68ed2
Q68ed2
Q68ed2
                                                                                                                                                                                                                                                                                                                3224756
            GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                 - protein search, using frame_plus_n2p model
                                                                                                                                                                                                                                                                                                           hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                    1612378 segs, 512079187 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MGR8 RAT
MGR8 MOUSE
MGR7 HUMAN
Q68ED2
MGR7 RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MGR4_RAT
MGR4_HUMAN
Q62MQ2
Q62916
Q68EF4
MGR8_HUMAN
                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MGR7 RAT
QBNFS2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QBNFS3
QBNFS4
Q9PWQ0
                                                                                                                                                                                                  BLOSUM62
Xgapop 10.0, Xgapext
Ygapop 10.0, Ygapext
Fgapop 6.0, Fgapext
Delop 6.0, Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    UniProt_03:*
1: uniprot_sprot:*
2: uniprot_trembl:*
                                                                                                                                                                                                                                                                                                                                         seq length: 0
seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB
                                                                                                                                                US-10-828-332-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 908
908
908
908
915
915
                                                                                                                                                                                                                                                                                                             Total number of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3050.5
3004.5
2752.5
2732
2546.5
2377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2377
2336
2336
2219
2214
2210
2189
2189
2189
                                                                                                                                                              Perfect score:
                                                                                                                                                                                                     Scoring table:
                                                                   OM nucleic
                                                                                                                                                                                                                                                                                                                                         Minimum DB
Maximum DB
                                                                                                                                                                            Sequence:
                                                                                                                                                                                                                                                                                     Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Database
                                                                                             ö
```

Š. Result

243 409 303 429 363 449 423 469 483

us-10-828-332-6.rup

```
CAGCTGCTCCGCCATCTGCGTGCGTTCGTGGACCCCCTCCCACTCGGTGGACTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
                                                                                            AAGAAGACTGTGAAGGGCATGGCTTGCTGCTGCCACTGCGAGCCCTGCACCGGGTACCAG
                                                                                                                                                                                                                                                                                                                    CTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   964 GGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATCACCTTCATCTCCTCTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCAGGAGGGGGAAGGTGCAGTTCGTG
                                                      ATTGACGCTGTGTACGCCATGGCCCACGCGTGCACGCCATGCACCGTGACCTGTGTCCC
                                                                                                                     GECCECETAGGACTCTGCCTTGGACCCCGTGGATGGCACCCAGCTGCTTAAGTAC
                                                                                                                                                                                             GACGCACCGGGGCGCTACGACATCTACCAGTACCAACTGCGCAATGGCTCGGCCGAGTAC
                                                                                                                                                                                                                                 AAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGGCCA
                                                                                                                                                                                                                                                                     TACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                      CTGCCCCTCTTCCTGCCCGTGGTGGGCATCGCCGCCACGCTGTTCGTGGTGGTCACGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGGAACTGAGCTACGTGCTG
                                                                                 244
                                                                                                                                                                                                                                                                                                                           530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1084 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1144
                                                               390
                                                                                                                                                                                                                                                                                                                                              664
         124
                                             184
                                                                                                                      304
                                                                                                                                                                                              124
                                                                                                                                                                                                                                  484
                                                                                                                                                                                                                                                                      544
                                                                                                                                                                                                                                                                                                          604
                                                                                                                                                                                                                                                                                                                                                                                                                       784
                                                                                                                                                                                                                                                                                                                                                                                                                                                            844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   710
                                                                                               g
                                                                                                                                   g
                                                                                                                                                                        셤
                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                 임
                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                          ò
                                                                          ઠ
                                                                                                                     ઠે
                                                                                                                                                    8
                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                            ઠે
                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its way non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            369
                                                                                                                                                     AGCCGCACGCTGGACAACAACAGCGCAACATCTGGTTTGCCGAGTTCTGGGGGGGCACAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SerargThrLeuAspAsnAsnArgArgAsnIleTrpPheAlaGluPheTrpGluAspAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGGTATCATCATCTTTGCCAACGAGGATGACA - - TCAGGGTTCGACCGATACTTCTCC
         Predominant
SUBCELLULAR LOCATION: Integral membrane protein.
TISSUB SPECIFICITY: Is widely distributed in the CNS. Predomina expression is seen in the granule cells of the cerebellum. SIMILARITY: Belongs to the G-protein coupled receptor 3 family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         (GlcNAc. .) (Potential).
(GlcNAc. .) (Potential).
(GlcNAc. .) (Potential).
                                                                                                                                                                                                                                                                                      Metabotropic glutamate receptor 4.

Extracellular (Potential).

Cytoplasmic (Potential).

Extracellular (Potential).

Extracellular (Potential).

Cytoplasmic (Potential).

Cytoplasmic (Potential).

Extracellular (Potential).

Extracellular (Potential).

Cytoplasmic (Potential).

Extracellular (Potential).

Cytoplasmic (Potential).

Cytoplasmic (Potential).

Cytoplasmic (Potential).

Cytoplasmic (Potential).

Cytoplasmic (Potential).

Cytoplasmic (Glounc...) (Potential)

N-linked (Glounc...) (Potential)

N-linked (Glounc...) (Potential)

N-linked (Glounc...) (Potential)

N-linked (Glounc...) (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     912
2 575
2 1
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 > R (in Ref. 2).
336430EF19B4B577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (1-912)
                                                                                                                   EMBL; M92077; -; NOT ANNOTATED_CDS.
EMBL; M90518; AAA93190.1; -.
PIR; JH0563; JH0563.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-828-332-6 (1-1755) x MGR4_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5.84e-174
3050.50
98.97$
98.63$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101818
                                                                                                                                                                                                                                                                                          P23385; 1EWK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                             TRANSMEM
DOMAIN
TRANSMEM
DOMAIN
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CARBOHYD
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CARBOHYD
                                                                                                                                                 HSSP;
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
```

489

543 509 603 529 663 549 723 269 783 589 843 1023

609

629 963 649

903

1083

689

1143

1203

729

```
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHAIN
 1323
                                                                                                                  1443
                                                                           1324 TACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGCTTC 1383
                                                                                                                                                        1444 CAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTGACGGTCTCCGTGAGTCTGAGC 1503
                                                                                                                                                                                             1504 GCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCATCCTCTTCCACCCG 1563
                                                                                                                                                                                                                                                                          1624 TCCAACAAGAGTTCACAGAAGGGCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAGCTG 1683
                                                                                                                                                                                                                                                                                                                TGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACAGACCTACGTCACCTACACCAAC 1743
                                                                                                                                                                                                                                    1564 GAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCGCCACCATG 1623
                                                        769
                                                                                               789
                                                                                                                                    809
                                                                                                                                                                          829
                                                                                                                                                                                                               849
                                                                                                                                                                                                                                                      869
                                                                                                                                                                                                                                                                                             889
                                                                                                                                                                                                                                                                                                                           1384 ACCATGTACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCCATCTTTTTGGCACCTCA
                                                                                                                            790 ThrMetTyrThrThrCysIleValTrpLeuAlaPheIleProIlePhePheGlyThrSer
                                                                                                                                                                                                       770 TyrAlaIleLysThrArgGlyValProGluThrPheAsnGluAlaLysProIleGlyPhe
                                             1264 GACCTGTCCCTCATCTGCCTGCGCTACAGCATGCTGCTGATGGTCACGTGTACTGTG
                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
MEDLINE=98141892; PubMed=9473604; DOI=10.1016/S0169-328X(97)00277-5; Wu S., Wright R.A., Rockey P.K., Burgett S.G., Arnold J.S., Kosteck P.R. Jr., Johnson B.G., Schoepp D.D., Belagaje R.M.; "Group III human metabotropic glutamate receptors 4, 7 and 8: molecular cloning, functional expression, and comparison of pharmacological properties in RGT cells."; Brain Res. Mol. Brain Res. 53:88-97(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=96346635; PubMed=8738157; DOI=10.1016/0169-328X(95)00321-1; Makoff A., Lelchuk R., Oxer M., Harrington K., Emson P.; "Molecular characterization and localization of human metabotropic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                              01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
25-OCT-2004 (Rel. 45, Last annotation update)
Metabotropic glutamate receptor 4 precursor (mGluR4).
Name=GRM4; Synonyms=GPRC1D, MGLUR4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 glutamate receptor type 4.";
Brain Res. Mol. Brain Res. 37:239-248(1996).
                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                     CATGCCATC 1752
                                                                                                                                                                                                                                                                                                                                                                 |||||||||
910 HisAlaIle 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
TISSUE=Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
TISSUE=Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                               HUMAN
                                                                                                                                                                                                                                                                                                                1684
                                                                                                                                                                                                                                                                                                                                                      1744 (
1204
                                                                                                                                                                                                                                                                                                                                                                                                               MGR4 HUM
Q14833;
                                                                                                                                                                                                                                                                                                                                                                                                    HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                   g
                                                                           ઠે
                 셤
                                     ઠ
                                                                                                               ઠે
                                                                                                                                ద
                                                                                                                                                       ઠે
                                                                                                                                                                      셤
                                                                                                                                                                                       ઠે
                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                       셤
```

```
REDINESSIALS; Debace-157140, Disc. 23-06149-M; Nobechiat China.

REDINESSIALS; Debace-157140, Disc. 23-06149-M; Nobechiat China.

REDINESSIALS; Debace-157140, Disc. 24-06149-M; Nobechiat China.

REDINESSIALS; Debace-112542;

REDINESSIALS; Debace-
```

us-10-828-332-6.rup


```
CAGGACCAACGGACACTTGACCCCCCCCCCCCAGGGGCCCTCAAGTGCGACATCTCG
                                                                                                                                                                                                          GAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCCATG
                                                                                                                                                                                                                                                                                                                                                                                                                           ValArgTyrAsnAspThrProlleValLysAlaSerGlyArgGluLeuSerTyrValLeu
                                                                                                                           GCCCCCCCCCTTTCATCAGCCCCGGCCTCGCAGCTGGCCATCACCTTCATCTCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 3

Q6ZMQ2

AC Q6ZMQ2

AC Q6ZMQ2;
DT 05-JUL-2004 (TrEMBLrel. 27, Created)

DT 05-JUL-2004 (TrEMBLrel. 27, Last sequence update)

DT 05-JUL-2004 (TrEMBLrel. 27, Last annotation update)

C S-JUL-2004 (TrEMBLrel. 27, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1744 CATGCCATC 1752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HisAlaile
                                                                                                                                                                                                                                                                        1324
                                                                                                                                                                                                                                                                                                                                              1444
                                                                                         1024
                                                                                                                                                               1144
                                                                                                                                                                                                  1204
                                                                                                                                                                                                                                     1264
                                                                                                                                                                                                                                                                                                                                                                                  1504
                                                                                                                                                                                                                                                                                                                                                                                                                   1564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1684
  610
                                                      964
                                                                       650
                                                                                                                            1084
                                                                                                                                                                                 710
                                                                                                                                                                                                                   730
                                                                                                                                                                                                                                                      750
                                                                                                                                                                                                                                                                                                                                                                                                                                     850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              910
                                                                                                                                      8 6 6 6
                                                                                                                                                                                                                                 6 8 6
                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                       8 8
                                                                                                                                                                                                                                                                                                                                                           ያ ያ
                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                               8 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                               셤
                                                     ò
                                                                  g
                                                                                 ઠે
                                                                                                       셤
                                                                                                                     ò
                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                              ⋧
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ે
                                                                                                                                                      349
                                                                                                                                                                                                                            389
                                                                                                                                                                                                                                                                                                                                      449
                                                                                                                                                                                                                                                                                                                                                                                                           489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               903
                                                                                                                                                                                         369
                                                                                                                                                                                                           183
                                                                                                                                                                                                                                              243
                                                                                                                                                                                                                                                               409
                                                                                                                                                                                                                                                                                                  429
                                                                                                                                                                                                                                                                                                                     363
                                                                                                                                                                                                                                                                                                                                                       423
                                                                                                                                                                                                                                                                                                                                                                        469
                                                                                                                                                                                                                                                                                                                                                                                                                             543
                                                                                                                                                                                                                                                                                                                                                                                                                                              509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              609
                                                                                                                                                                                                                                                                                 303
                                                                                                                                                                                                                                                                                                                                                                                         483
                                                                                                                                     63
                                                                                                                                             PheHisCysLysLeuSerArgHisAlaLeuLysLysGlySerHisValLysLysCysThr
                                                                                                                                                                                                                                             AACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCAGGAGGGGAAGGTGCAGTTCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                      TyrGlnValAspArgTyrThrCysLysThrCysProTyrAspMetArgFroThrGluAsn
                                                                                                                                     GGGGTATCATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC
                                                                                                                                                                        AGCCGCACGCTGGACAACAACAGGCGCAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC
                                                                                                                                                                                                            TICCATIGCAAGTIGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
                                                                                                                                                                                                                                                        AAGGTCATCGGCTCGTGGACAGACCACCTGGACCGAATAGAGCGGATGCAGTGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGAGTGGCCAGCTGCCGCGCTCCATCTGCAGTCTGCCCTGCCAGCCGGGGAGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGAAGACTGTGAAGGGCATGGCTTGCTGGCACTGCGAGCCCTGCACCGGGTACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGCACGAGCTGCCAGCCCATCCCCATCGTCGAGTGGAGTCGGCCGTGGGCCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTGCTG
   (Potential)
 N-linked (GlCNAc. . .) (Pv
V -> I.
/FTId=VAR 012992.
V; 4A2F36E63A2EAF5A CRC64.
                                                      912
564
6
112
1
                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                    US-10-828-332-6 (1-1755) x MGR4_HUMAN (1-912)
                             MW.
                                                     3.27e-171
3004.50
97.77%
96.74%
                             AA; 101867
   569
                                                              Score:
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
   569
797
                            912
                                             Alignment Scores:
Pred. No.:
  CARBOHYD
VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                           470
                                                                                                                                                                                                                                                                                                                                                                                                                                               490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         550
                                                                                                                                     7
                                                                                                                                                                        64
                                                                                                                                                                                          350
                                                                                                                                                                                                           124
                                                                                                                                                                                                                            370
                                                                                                                                                                                                                                              184
                                                                                                                                                                                                                                                                390
                                                                                                                                                                                                                                                                                 244
                                                                                                                                                                                                                                                                                                   410
                                                                                                                                                                                                                                                                                                                     304
                                                                                                                                                                                                                                                                                                                                      430
                                                                                                                                                                                                                                                                                                                                                                                           424
                                                                                                                                                                                                                                                                                                                                                                                                                              484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                844
                             SEQUENCE
                                                                                                                                                                                                                                                                                              ያ ያ
                                                                                                                                                                                                                                                                                                                                                                                                                        8 6 8 6
   FT
                                                                                                                                     ઠે
                                                                                                                                                    g
                                                                                                                                                                        ઠે
                                                                                                                                                                                     8 8 8 8 8
                                                                                                                                                                                                                                                                                                                                 名 &
                                                                                                                                                                                                                                                                                                                                                                    8 6 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6 B 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      음 강
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠ
```

644 427 447

764 467 824 487

704

```
GATCGCAGAGCCGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCAT
                                                                                                                                                                                                                                                                                                                                                       GGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCCGGCCTCGCAGCTGGCCATCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGAGCGGATGCAGTGGCCAGGAGTGGCCAGCTGCCGCGCTCCATCTGCAGTCTGCC
                                                                                                                                                                                                                                                                                                                                                               CATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            387
                                                              585
                                                                                                                                                     447
                                                                                                                                                                                                                                                                                                                   1005
                                                                                                                                                                                                                                                                                                                                                        1065
                                                                                                                                                                                                                                                                                                                                                                                          1125
                                                                                                                                                                                                                                                                                                                                                                                                                            1185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             707
                                                                              407
                                                                                                                                   705
                                                                                                                                                                       765
                                                                                                                                                                                        467
                                                                                                                                                                                                           825
                                                                                                                                                                                                                           487
                                                                                                                                                                                                                                             885
                                                                                                                                                                                                                                                               507
                                                                                                                                                                                                                                                                                 945
                                                                                                                                                                                                                                                                                                                                     547
                                                                                                                                                                                                                                                                                                                                                                                                                                              607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1545
                                                                                                                                                                                                                                                                                                                                                                        567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           687
          ል ይ
                                       Q
                                                           õ
                                                                          a
                                                                                                ઠ
                                                                                                            셤
                                                                                                                                   õ
                                                                                                                                                8 S
                                                                                                                                                                                   셤
                                                                                                                                                                                                          ઠ
                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                        ठ
                                                                                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                             ያ ያ
                                                                                                                                                                                                                                                                                                                                8 S
                                                                                                                                                                                                                                                                                                                                                                   8 è
                                                                                                                                                                                                                                                                                                                                                                                                       8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ર્જ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  404
                                                                                                                                                                                                                                                                                                                                                              224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGGAAGGTGCAGTTCGTGATTGACGCTGTACGCCATGGGCCACGCGCTGCACGCCCTT 284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGG 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAGAAT 524
                    ENGUENCE FROM N.A.

TISSUE-Brain;

Kawakami B., Sugiyama A., Takemoto M., Sugiyama T., Irie R.,

A CISSUE-Brain;

Kawakami B., Sugiyama A., Takemoto M., Sugiyama T., Irie R.,

A CISSUE, T., Satch H., Ota T., Wakamareu A., Ishii S., Yamamoto J.,

A Yamashita H., Matsuo K., Nakamura T., Kimura K.,

A Wagateuma M., Murakawa K., Kanehori K., Takahashi-Fujii A., Oshima A.,

Suzuki Y., Sugano S., Nagahari K., Masuho Y., Nagai K., Isogai T.;

Submitted (MAR-2004) to the EMBL/GenBank/DBW databases.

B. Submitted (MAR-2004) to the EMBL/GenBank/DBW databases.

CO: GO:0016020; C:memborane; IEA.

GO: GO:0000807; F:metabotropic glutamate, GABA-B-like recepto. ..; IEA

GO: GO:0000807; F:metabotropic glutamate, GABA-B-like recepto. ..; IEA

InterPro: IPR00103; Mglu_receptor.

B. InterPro: IPR00105; Muglu_receptor.

B. InterPro: IPR00105; Muglu_receptor.

B. InterPro: IPR00105; Jum J. ..

B. PRINTS; PR00503; Tem 3; 1.

B. PRINTS; PR00503; MTABOTROPICR.

B. PRINTS; PR00503; MTABOTROPICR.

B. PRINTS; PR00503; MTABOTROPICR.

B. PROSITE; PS00980; G_PROTEIN_RECEP_F3_2; 1.

B. PROSITE; PS00980; G_PROTEIN_RECEP_F3_4; 1.

B. PROSITE; PS00980; G_PROTEIN_RECEP_F3_4; 1.
                                                                                                                   .; IEA
                                                            Α.;
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 r::|||:::
rLyglleAlaProValLeuHisLeuGluGluValAlaGluGlyAlaValThrIleLeuPr
                                                                                                                                                                                                                                                                                                                                                                                                            ::::||| ::::||| 227 aAlaArgAlaAsnGlnThrGlyHisPhePheTrpMetGlySerAspSerTrpGlySe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AACCTTCAATGAGAACGGAGACGCCCCCCCCTACGACATCTACCAGTACCAACTGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGCCGCACGCTGGACAACAGGCGCGAACATCTGGTTT----GCCGAGTTCTGGGAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                     120 CAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGC-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -CACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCAGGA
                                                                                                                                                                                                                                                       CRC64
                                                                                                                                                                                                                                                                               796
530
114
38
8
                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                      FAE466D1D45D3829
                                                                                                                                                                                                                                                                                                                                              US-10-828-332-6 (1-1755) x Q6ZMQ2 (1-796)
                                                                                                                                                                                                                                                      796 AA; 88492 MW;
                                                                                                                                                                                                                                                                                3.61e-156
2752.50
92.20%
89.83%
83.33%
                                                                                                                                                                                                                                                                                       Score:
Percent Similarity;
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                       Alignment Scores
                                                                                                                                                                                                                                             Receptor.
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  345
                                                                                                                                                                                                                                                                                                                                                                                                                                                      247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   327
                                                                                                                                                                                                                                                                                                                                                                                                   63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     405
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6 ይ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               요
```

ઠે

ò

66666

8 S

ઠે 셤 ઠે

1064

567

547

944 527

884 507 1124

587

1184

1244

627

1304

647

1364

667

1484

707

1424

687

1544

727

363 449 423

243 409 303 469

489

543 509 603 529 663 549

483

φ

```
PheHisCysLysLeuSerArgHisAlaLeuLysLysGlySerHisIleLysLysCysThr 389
                                                                                     GGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGGGCGTGCTCAAGTGCGACATCTCG
                                                                                                                                                                                           AACCGAGGGCGATCGGGCAGGACTCGGCCTATGAGCAGGAGGGGAAAGGTGCAGTTCGTG
                                     ATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGCCCATGCACCGTGACCTGTGTCCC
                                                                                                                                                                              ATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAAACCTTCAATGAGAACGGA
                                                                                                                                                                                                                                  GACGCACCGGGGCGCTACGACATCTACCAGTACCAACTGCGCAATGGCTCGGCCGAGTAC
                                                                                                                                                                                                                                                                                  AAGGTCATCGGCTCGTGGACCAGCTGCACCTCAGAATAGAGCGGATGCAGTGGCCA
                                                                                                                                                                                                                                                                                                                                     GGGAGTGGCCAGCAGCTGCCGCGCTCCCATCTGCCAGTCTGCCCTGCCAGCCCGGGGAGCGA
                                                                                                                                                                                                                                                                                                                                                    GlySerGlyGlnGlnLeuProArgSerIleCysSerLeuProCysGlnProGlyGluArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGCCCCTCTTCCTGGCCGTGGTGGCCATCGCCGCCACGCTGTTCGTGGTGGTCACGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGCGCTACAACGATACCCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   630 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               670 ]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        019
                                                                                                   410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1144
                                                                                                                                                                                                                                                           470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    730
 370
                         184
                                                  390
                                                                           244
                                                                                                                             304
                                                                                                                                                      430
                                                                                                                                                                                364
                                                                                                                                                                                                                                  424
                                                                                                                                                                                                                                                                                   484
                                                                                                                                                                                                                                                                                                                                      544
                                                                                                                                                                                                                                                                                                                                                               510
                                                                                                                                                                                                                                                                                                                                                                                       604
                                                                                                                                                                                                                                                                                                                                                                                                                530
                                                                                                                                                                                                                                                                                                                                                                                                                                          664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    710
                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6 6 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             දු දු
                 8
                                          8 S
                                                                                            쉽
                                                                                                                                                셤
                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                  8 &
                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                      8 S
                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                    ∂
                                                                                                                                                                              õ
                                                                           1724
                          1664
                                                                                                    787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              349
                                                  767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      183
 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      63
                                                                                                                                                                                                                                                                                                                                                                                                                               IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
  rllelleLeuPheHisProGluGlnAsnValProLysArgLysArgSerLeuLysAlaVa
                          GGTCACCGCCGCCACCATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAATGG
                                        062916 PRELIMINARY; PRT; 983 AA.
062916;
01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 24, Last annotation update)
01-NOV-1996 (TrEMBLrel. 24, Last annotation update)
Metabotropic glutamate receptor 4b.
Rattus norvegicus (Rat).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
NCBI_TAXID=10116;
                                                                                                                                                                                                                                                                                                                                  R SEQUENCE FROM N.A.

A C'HARA P.J.;

ACHARA P.J.;

BUBLI, 1447-1996) to the EMBL/GenBank/DDBJ databases.

BUBLI, 1447-1996) to the EMBL/GenBank/DDBJ databases.

BERL, 1447-1996, the EMBL/GENBANGH databases.

BERL, 1447-1996, the EMBL/GEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AA; 109276 MW; 072F0D8B3A840A80 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     983
7
34
61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                             x Q62916 (1-983)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6.26e-155
2732.00
85.09$
83.99$
82.71$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-828-332-6 (1-1755)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                         1605
                                                                            1665
                                                                                                                             1725
    727
                                                                                                    767
                                                                                                                                                       787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
DB:
                                                                                                                                                                               a
                                                                                               名
                                                                                                                             ò
                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઢ
                        ઠે
                                                                           ઠે
```

1023

609

569 783 589 843

723

629

963 649

903

1083

689

699

1143

709

1203

1263

Wed

```
and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   92832 MW; 2B90570F77861FB1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-828-332-6 (1-1755) x Q68EF4 (1-832)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7.35e-144
2546.50
96.41%
95.21%
77.10%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          al protein.
832 AA; 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hypothetical
SEQUENCE 8:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   424
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                            1383
                                                                                                                                                                                                                                     1443
                                                                                                                                                                                                                                                                                                                                              1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                  1504 GCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCATCTTCCAC--- 1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           --- CCGGAGCAGAACGTGCCCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCC 1617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1618 ACCATGTCCAACAAGT----- 1633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          G-------1705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1677
                                                                             769
                                                                                                                                                                                789
                                                                                                                                                                                                                                                                                          809
                                                                                                                                                                                                                                                                                                                                                                                                829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

STRAIN=C57BL/6; TISSUE=Mouse;

STRAIN=C57BL/6; TISSUE=Mouse;

Straubsd=127932; Dol=10.1073/pnas.242603899;

Klausner R.D., Feingold E.A., Grouse L.H., Derge J.G.,

Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heieh F.,

Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

Brownstein M.J., Uddin T.B., Toshiyuki S., Carninci P., Prange C.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Richards S.W., Worley D.M., Sodergren E.J., Malek J.A., Gunaratne P.H.,

Nillalon D.K., Murny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Rahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        903 sValAlaLysGluLysLysLysGlyGlyGluSerProProThrLysLysProLysGl 923
                        ACCATGTACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCCATCTTTTTTGGCACCTCA
                                                                                                                                                                                                                                                              ThrMetTyrThrThrCysIleValTrpLeuAlaPheIleProIlePhePheGlyThrSer
                                                                                                                                                                                                                                                                                                                                              CAGTCAGCCGACAAGCTGTACATCCAGACCAACCACTGACGGTCTCCGTGAGTCTGAGC
                                                                                                                                                                                                                                                                                                                                                                       863 aProCysProSerSerLeuSerCysProlleProAlallellePheSerSerValProPr
                                                                                                                            TACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Phebro-PheCysSerTrpProSer-------ProAlaIleCysProAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ------AGAAGGCAACTTCAGGCCAATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               883 oArgSerHisPheLeuProAlaPheProLeuLeuGlyPheIleHisGlnLeuPheHisHi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-OCT-2004 (TrEMBLrel. 28, Created)
25-OCT-2004 (TrEMBLrel. 28, Last sequence update)
25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
Mypothetical protein.
Mypothe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1634 ----TCACAC
                                                                       750
                                                                                                                            1324
                                                                                                                                                                                770
                                                                                                                                                                                                                                  1384
                                                                                                                                                                                                                                                                                                                                                                                                810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               850
                                                                                                                                                                                                                                                                                       790
                                                                                                                                                                                                                                                                                                                                           1444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q68EF4
Q68EF4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 5
068E74
2668E AC 068E DT 25-0

                                                                                                                                                                   셤
                                                                  셤
                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                      a
                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                        ठे
                                                                                                                                                                                                                                                                                                                                                                               ద
                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ď
```

183 389 243 489 349 123 369 409 363 423 469 483 63 Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakesley.R.W., Touchman J.W., Green E.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S., Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E., Jones S.J., Marra M.A., "Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences."; AGCCGCACGCTGGACAACAACAGCGCCAACATCTGGTTTTGCCGAGTTCTGGGAGGACAAC AACCGAGAGCGCATCGGCCAGGACTCGGCCTATGAGCAGGAGGGAAGGTGCAGTTCGTG GGGGTATCATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC GGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGCACCCAGCTGCTTAAGTAC ATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAACCTTCAATGAGAACGGA GACGCACCGGGGCGCTACGACATCTACCAGTACCAACTGCGCAATGGCTCGGCCGAGTAC PERGUENCE FROM N.A.

SEQUENCE FROM N.A.

Director MGC Project;

Submitted (Aug-2004) to the EMBL/GenBank/DDBJ databases.

Lucator MGC MGC Project;

Submitted (Aug-2004) to the EMBL/GenBank/DDBJ databases.

REMBL; BC080284; AMBC02841;

RITEFPTO; IPR001328; AMF receptor.

RITEFPTO; IPR001327; GPCR Mgr.

RITEFPTO; IPR00136; MGJL receptor.

RITEFPTO; IPR00136; MGJL receptor.

REMBL; PR00136; MMF receptor.

REMBL; PR00136; MMF receptor.

REMBL; PR00136; MMR receptor.

REMBL; PR00136; MTABOTROPCR.

REMI; PR0156; MTABOTROPCR.

RRINTS; PR00159; GPROTEIN RECEP F3.1; I.

RROSITE; PS00980; GPROTEIN RECEP F3.2; I.

RROSITE; PS00980; GPROTEIN RECEP F3.3; I.

RROSITE; PS500591; GPROTEIN RECEP F3.3; I.

RROSITE; PS500591; GPROTEIN RECEP F3.3; I.

RROSITE; PS500591; GPROTEIN RECEP F3.4; I.

g

6 6 6

6 6 6 6

q

ò

```
1023
                                                                                                                                                                                                                                          1083
                                                                                                                                                                                                                                                                                            1203
                                                                                                                                                                                                                                                                                                                      1263
                                                                                                                                                                                                                                                                                                                                                                        1383
                                                                                                                                                                                                                                                                                                                                                                                                 1443
                                                                                                                                                                                                    649
                                                                                                                                                                                                                             699
                                                                                                                                                                                                                                                                                                                                                                                    789
                                                                                                                                                                                                                                                                                                                                                                                                                                       829
                                                                                                                                                                                                                                                      689
                                                                                                                                                                                                                                                                                                                                  749
                                                                                                                                                                                                                                                                                                                                                            769
                                                                                                                                                  609
                                                                                                                                                                           629
                                 603
                                                          663
                                                                      549
                                                                                                                                     843
                                                                                                                                                                                        963
                                                                                  LyBLysThrValLysGlyMetAlaCysCysTrpHisCysGluProCysThrGlyTyrGln
                                                                                                           GTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTGCTG
                                                                                                                                                                     TyralaileLysThrArgGlyValProGluThrPheAsnGluAlaLysProlleGlyPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGAAGACTGTGAAGGGCATGGCTTGCTGCTGCCACTGCGAGCCCTGCACCGGGTACCAG
                                                                                                                                     CTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGACCTG
                                                                                                                                                                                                                 GGGACCTGTTCGCTCCGCCGCATCTTCCTAGGCCTCGGCATGAGCATCAGCTACGCGGCC
                                                                                                                                                                                                                                          GCCCCCCCCCTTTCATCAGCCCCGGCCTCGCTGGCCATCACCTTCATCCTCATCTCCTG
                                                                                                                                                                                                                                                                          CAGCTGCTCGGCATCTGCGTGGTTCGTGGTGGACCCCTCCCACTCGGTGGTGGACTTC
                                                                                                                                                                                                                                                                                                    CAGGACCAACGGACACTTGACCCCCCCTTTGCCAGGGGCGTGCTCAAGTGCGACATCTCG
                                                                                                                                                                                                                                                                                                                             GACCTGTCCCTCCATCTGCCTGCTGGCTACAGCATGCTGCTGATGGTCACGTGTACTGTG
                                                                                                                                                                                                                                                                                                                                                       AspLeuSerLeuIleCysLeuLeuGlyTyrSerMetLeuLeuMetValThrCysThrVal
                                                                                                                                                                                                                                                                                                                                                                        TACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                 ACCATGTACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCATCTTTTTGGCACCTCA
                                                                                                                                                                                                                                                                                                                                                                                                       ThrwetTyrThrThrCysIleValTrpLeuAlaPheIleProIlePhePheGlyThrSer
                                                                                                                                                                                                                                                                                                                                                                                                                          CAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTGACGGTCTCAGTGAGTCTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ala 830
                                                                                                                                                                                                                                                                                                                                                                        1324
                                                                                                                                                 590
                                                                                                                                                                                                                                                       670
                                                                                                                                                                                                                                                                    1084
                                                                                                                                                                                                                                                                                             1144
                                                                                                                                                                                                                                                                                                                                               1264
                                                                                                                                                                                                                                                                                                                                                                                                  1384
                                                                                                                                                                                                                                                                                                                                                                                                                                                     1504
                    490
                                             510
                                                          604
                                                                      530
                                                                                   664
                                                                                                            724
                                                                                                                         570
                                                                                                                                      784
                                                                                                                                                               844
                                                                                                                                                                            610
                                                                                                                                                                                         904
                                                                                                                                                                                                     630
                                                                                                                                                                                                                  964
                                                                                                                                                                                                                              650
                                                                                                                                                                                                                                           1024
                                                                                                                                                                                                                                                                                 690
                                                                                                                                                                                                                                                                                                          710
                                                                                                                                                                                                                                                                                                                       1204
                                                                                                                                                                                                                                                                                                                                   730
                                                                                                                                                                                                                                                                                                                                                            750
                                                                                                                                                                                                                                                                                                                                                                                     770
                                                                                                                                                                                                                                                                                                                                                                                                              790
                                                                                                                                                                                                                                                                                                                                                                                                                            1444
                                                                                                                                                                                                                                                                                                                                                                                                                                        810
                                 544
```

8 6 8

g

ઠે

8 8

ò

```
Month Judy Month Struck Control (1998 M.)

Month Judy M. (1997 (1897 (1998 M.))

Month Judy M. (1997 (1997 M.))

Month Judy M. (1997 (
```

363

445 423 465 483 485 543 505 603 525

us-10-828-332-6.rup

```
CAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGACCCCTCCCACTCGGTGGTGGACTTC 1203
 SerArgThrLeuAlaAsnAsnArgArgAsnValTrpPheAlaGluPheTrpGluGluAsn 366
                                                                                                                                                                                                                                                                                                                                                    AAGAAGACTGTGAAGGGCATGGCTTGCTGCTGGCACTGCGAGCCCTGCACCGGGTACCAG 663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGACCTG 963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGCCATGCACCGTGACCTGTGTCCC
                                                                                                               GACGCACGGGGGCCTACGACATCTACCAGTACCAACTGCGCAATGGCTCGGCCGGGTAC
                                                                                                                                                                                                                                       AAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGGCCA
                                                                                                                                                                                                                                                                                                                      GTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             646 IleIleCysSerPheArgArgValPheLeuGlyLeuGlyMetCysPheSerTyrAlaAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GINLEULEUGIyValPheValTrpPheValValAspProProHisIleIleIleAspTyr
                                                           AACCGAGAGCGCATCGGCCAGGACTCGGCCTATGAGCAGGAGGGGAAGGTGCAGTTCGTG
                                                                        GlyLeuGluArgIleAlaArgAspSerSerTyrGluGluGluGlyLysValGlnPheVal
                                                                                                                                            GECCGCGTAGGACTCTCCCCTCGCATGGACCCCGTGGATGGCACCCAGCTGCTTAAGTAC
                                                                                                                                                                                                                                                                                                            GGGAGTGGCCAGCTGCCGCGCTCCATCTGCAGTCTGCCCTGCCAGCCCAGCCGGGGAGCGA
                                                                                                                                                                                                                                                                                                                                                                                           TACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                    CGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGGCCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                              GGGACCTGTTCGCTCCGCCGCATCTTCCTAGGCCTCGGCATGAGCATCAGCTACGCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCCCGCGTTTCATCAGCCCCGGCCTCGCAGCTGGCCATCACCTTCATCCTCATCTCCCTG
                     TTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
                                                                                                                                                                                    ATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAACCTTCAATGAGAACGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGCCCCTCTTCCTGGCCGTGGTGGCATCGCCGCCACGCTGTTCGTGGTGGTCACGTTT
 347
                                                           184
                                                                                                                                                                                                       446
                                                                                                                                                                                                                                                                                       486
                                                                                                                                                                                                                                                                                                            544
                                                                                                                                                                                                                                                                                                                                 909
                                         367
                                                                                 386
                                                                                                     244
                                                                                                                       406
                                                                                                                                            304
                                                                                                                                                               426
                                                                                                                                                                                    364
                                                                                                                                                                                                                            424
                                                                                                                                                                                                                                                 466
                                                                                                                                                                                                                                                                     484
                                                                                                                                                                                                                                                                                                                                                                        526
                                                                                                                                                                                                                                                                                                                                                                                            664
                                                                                                                                                                                                                                                                                                                                                                                                                 546
                                                                                                                                                                                                                                                                                                                                                                                                                                                        999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1144
                     124
                                                                                                                                                                                                                                                                                                                                                    604
                                                                                                                                                                                                                                                                                                                                                                                                                                    724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               904
                                      셤
                                                        ð
                                                                             යු
                                                                                                    ò
                                                                                                                    윰. 장
                                                                                                                                                             g
                                                                                                                                                                                   ઠે
                                                                                                                                                                                                    요
                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                    ద
                                                                                                                                                                                                                                                                                                                                                                                                              a
a
                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                     요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ឧ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            &· 원
                    ઠે
                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ||||
|||| SlyAlaValThrIleLeuProLysArgAlaSerIleAspGlyPheAspArgTyrPheArg 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63
                                                                                                                                                                                                                                                                                                                                                                     SAĞTEVTENEDIGDAĞCRYDIFQYQITNKSTEYKVIGHWINQ
LHLKVED -> CRRĞIQMSLPWPILFTPSFSSSWAVLALLS
LLMKTEMLLDVMISSSIK (in isoform C).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGGCTATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCCCACGCTGGACAACAACAACAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC
                                                                                                                                                                                                                                                                                                                                          (in
                                                                                                                                                                                                                                                                                                                                          ISSTKTTYISYSNHSI -- SKSSVEFPMVKSGSTS
                      Pfam, PP01094, ANF_receptor; 1.

PRINTS; PR00248; GPCRMGR.

PROSITE; PS00979; G PROTEIN RECEP_F3_1; 1.

PROSITE; PS00991; G PROTEIN RECEP_F3_2; 1.

PROSITE; PS00981; G PROTEIN RECEP_F3_3; 1.

PROSITE; PS00259; G PROTEIN RECEP_F3_4; 1.

Alternative splicing; G-protein coupled receptor; Glycoprotein; Multigene family; Olfaction; Polymorphism; Signal; Transmembrane. SIGNAL
                                                                                                                                                                                                                                                                                                  (Potential)
                                                                                                                                                                                                                                                                                        (Potential)
                                                                                                                                                                                                                                                                                                                       (Potential)
                                                                                                                                                                                                                                                                                                                              (Potential)
                                                                                                                         receptor
                                                                                                          Metabotropic glutamate recei

Extracellular (Potential).

Cytoplasmic (Potential).

2 (Potential).

2 (Potential).

2 (Potential).

Cytoplasmic (Potential).

3 (Potential).

Cytoplasmic (Potential).

Cytoplasmic (Potential).

6 (Potential).

Extracellular (Potential).

6 (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /FTId=VAR 01448.

V -> G (in dbSNP:2234948).

/FTId=VAR 01449.

R -> A (in Ref. 2).

T -> I (in Ref. 2).

A -> G (in Ref. 2).

I -> N (in Ref. 1).

S -> T (in Ref. 2).

H -> A (in Ref. 2).

S -> T (in Ref. 2).

H -> N (in Ref. 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CRC64;
                                                                                                                                                                                                                                                         Extracellular (Potential) 7 (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                 | S - C (in dbSNP:769194).
|FTId=VAR 014446.
|F -> C (in dbSNP:769202).
                                                                                                                                                                                                                          5 (Potential).
Cytoplasmic (Potential).
6 (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /FTId=VAR 014447.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    908
888
88
88
7
                                                                                                                                                                                                                                                                            Cytoplasmic (Potential)
N-linked (GlCNAc. .)
N-linked (GlCNAc. .)
N-linked (GlCNAc. .)
                                                                                                                                                                                                                                                                                                                      (GlcNAc. . .)
                                                                                                                                                                                                                                                                                                                                                                                                   /FTId=VSP 002033.
Missing (In isoform C)
/FTId=VSP_002034.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                             002032
                                                                                                                                                                                                                                                                                                                                                   isoform B) /FTId=VSP (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (1-908)
                                                                                                                                                                                                                                                                                                                      N-linked
N-linked
InterPro; IPR000162; Mtglu_receptor.
InterPro; IPR00014; Mtglu_receptor8.
Pfan; PR00003; 7tm 3; 1.
Pfan; PF01094; ANF_receptor; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-828-332-6 (1-1755) x MGR8_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₹.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9.93e-134
2377.00
85.08%
75.13%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    101740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  194
460
642
768
904
                                                                                                                                  5583
6608
6620
6641
7716
6647
7716
8818
8818
8818
908
8845
908
                                                                                                                                                                                                                                                                                                                                                                                                                                  10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 548
                                                                                                                                                                                                                                                                                                                                                                        501
                                                                                                                                                                                                                                                                                                                                                                                                                                                        21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               768
904
908
                                                                                                                       34
34
584
609
                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               548
                                                                                                                                                                                                                                                                                                                                                                        454
                                                                                                                                                                                                                                                                                                                                                                                                                                                        21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
Pred. No.:
                                                                                                                                                              TRANSMEM
DOMAIN
TRANSMEM
                                                                                                                                          TRANSMEM
                                                                                                                                                                                           DOMAIN
TRANSMEM
                                                                                                                                                                                                                 DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                      CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64
                                                                                                                                                                                                                                                 TRANSMEM
                                                                                                                                                                                                                                                                                         CARBOHYD
                                                                                                                                                                                                                                                                                                           CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                        VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                 VARSPLIC
                                                                                                                                                                                                                                                                     TRANSMEM
                                                                                                                                                                                                                                                                                                  CARBOHYD
                                                                                                                                                                                                                                                                                                                                          VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                    VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                        VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
DB:
                                                                                                                                 DOMAIN
                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                              DOMAIN
 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8 8
```

545 723 565 783 585 843 605 903 625 1083

1143

685

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                        Alignment Scores:
Pred. No.:
                                                                                                      Receptor.
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      664
                                                                                                                                                                                                                                                                                                                                                                                                   7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
8 ₹ 8 8 8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                    qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         જે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              જે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1743
                                                                                                                                                                                                 1383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ., IDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGGCGTGCTCAAGTGCGACATCTCG
                                       GACCTGTCCCTCATCTGCCTGCTGCTACAGCATGCTGCTGATGGTCACGTGTACTGTG
                                                                                                                                TACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGCTTC
                                                                                                                                                                                                                           TyralalleLysThrArgGlyValProGluThrPheAsnGluAlaLysProlleGlyPhe
                                                                                                                                                                                                                                                                                          ACCATGTACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCCATCTTTTTTGGCACCTCA
                                                                                                                                                                                                                                                                                                                  ThrMetTyrThrThrCysIleIleTrpLeuAlaPheIleProllePheFheGlyThrAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCATCCTTCCACCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCACCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Craniata, Vertebrata, Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C STRAIN=BALB/c; TISSUB-Whole brain;
C STRAIN=BALB/c; TISSUB-Whole brain;
C GUO J., Ikeda S.R.;
T "Cloning of the mouse metabotropic glutamate receptor 8A.";
Cloning of Lub. 2004) to the EMBL/GenBank/DDBJ databases.
T "Cloning of AT763801.1;
T "Cloning of Lub. AAT769801.1;
T "GO; GO:0016021; C:integral to membrane; TAS.
GO; GO:0016021; C:integral to membrane; TAS.
T "InterPro; IPR0001828; ANF receptor.
T "InterPro; IPR0001829; Meglu_receptor.
T "InterPro; IPR000144; Meglu_receptor.
T "InterPro; IPR000144; Meglu_receptor.
T "Ther Pro; IPR00144; Meglu_receptor.

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .
п
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-0CT-2004 (TrEWBLrel. 28, Created)
25-0CT-2004 (TrEWBLrel. 28, Last sequence update)
25-0CT-2004 (TrEWBLrel. 28, Last annotation update)
Mane=Grm8A;
Mus muscrulus (Mouse).

Buts muscrulus (Mouse).

Mammalla; Butheria; Rodentia; Craniata; Vertebrata;
Mammalla; Butheria; Rodentia; Sciurognathi; Muridae;
MillaxID-10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATGCCATC 1752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |||:::|||
HisSerIle 908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1624
                                                               726
                                                                                                                                                     746
                                                                                                                                                                                                    1324
                                                                                                                                                                                                                                                                                          1384
                                                                                                                                                                                                                                                                                                                                                                                   1444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           886
                                                                                                                                                                                                                                              994
                                                                                                                                                                                                                                                                                                                                       984
                                                                                                                                                                                                                                                                                                                                                                                                                               806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                906
                                                                                                           1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q6B964
Q6B964;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 7

(68964)

AC 06899

AC 06899

DT 25-00

DT 25-0
                                                                                                                                                                                                                                                                          8 6
                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                         ઠે
                                                                                                                                         8 8
                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      કે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
```

```
425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         605
                                                                                                                                                                                                                                                                                                              385
                                                                                                                                                                                                                                                                                                                                    243
                                                                                                                                                                                                                                                                                                                                                         405
                                                                                                                                                                                                                                                                                                                                                                               303
                                                                                                                                                                                                                                                                                                                                                                                                                           363
                                                                                                                                                                                                                                                                                                                                                                                                                                                445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    843
                                                                                                                                                                                                                          346
                                                                                                                                                                                                                                                                    366
                                                                                                                                                                                                                                                                                          183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      423
                                                                                                                                                                                                                                               123
                                                                                                                                                                                                    63
                                                                                                                                                                                                               AAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGGCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |||:::|||||| ||||||::: ||||||||||
LysileileGlyHisTrpThrAsnGlnLeuHisLeuLysValGluAspWetGlnTrpAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGAAGACTGTGAAGGGCATGGCTGCTGCTGCGACTGCGAGCCCTGCACCGGGTACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCCGCACGCTGGACAACAACAACACGCGCAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC
                                                                                                                                                                                                                                                                                           ATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAACCTTCAATGAGAACGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GACGCACCGGGGGCCTACGACATCTACCAGTACCAACTGCGCAATGGCTCGGCCGAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGAGTGGCCAGCTGCCGCGCTCCATCTGCAGTCTGCCCTGCCAGCCGAGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCCACAGAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGCCCCTCTTCCTGGCCGTGGTGGGCATCGCCGCCACGCTGTTCGTGGTGGTCACGTTT
                                                                                                                                                                                                                                                                                                                                               GGGGTATCATCATCTTTGCCAACGAGGATGACA----TCAGGGTTCGACCGATACTTCTCC
                                                                   CRC64;
                                                                                                  908
604
708
704
708
                                                                   E9952B6D356EB8A8
                                                                                                  Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
PRINTS; PRO0593; MTABOTROPICR.
PROSITE; PS00979; G PROTEIN RECEP_F3_1; 1.
PROSITE; PS00980; G_PROTEIN_RECEP_F3_2; 1.
PROSITE; PS00981; G PROTEIN_RECEP_F3_3; 1.
PROSITE; PS50259; G_PROTEIN_RECEP_F3_4; 1.
                                                                                                                                                                               US-10-828-332-6 (1-1755) x Q6B964 (1-908)
                                                                 908 AA; 101827 MW;
                                                                                                  9.93e-134
2377.00
85.25%
74.96%
71.96%
```

8 셤 ઠે ద ઠે 엄 ઠે g ઠે 셤 ઠ a ð 유 ઠે 셤 ઠે 임 ઠે 임 ઠે a ò ద ò 엄 ò 셤 ઠે g

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RGD; 619858; Grm8.

RGD; 619858; Grm8.

RICEPTO; IRR001828; ANF receptor.

RICEPTO; IRR001828; ANF receptor.

RICEPTO; IRR000142; Mcglu_receptor.

RICEPTO; IRR000142; Mcglu_receptor.

RICEPTO; IRR000144; Mcglu_receptor.

REAM; PRO1054; ANF receptor;

REAM; PRO1054; ANF receptor;

RRNSITE; PS00918; GPCRMGR.

RROSITE; PS00980; GPROTEIN RECEP_F3_1; 1.

RROSITE; PS00981; GPROTEIN RECEP_F3_2; 1.

RROSITE; PS00981; GPROTEIN RECEP_F3_3; 1.

RROSITE; PS00981; GPROTEIN RECEP_F3_3; 1.

RROSITE; PS00981; GPROTEIN RECEP_F3_4; 1.

RROSITE; PS00981; GPROTEIN RECEP_F3_4; 1.

RROSITE; PS00981; GPROTEIN RECEP_F3_4; 1.

RROSITE; RROSI
                                                                                                                                                                                                                                                                                         Name=Grm8; Synonyms=Gprc1h, Mglur8;
Rattus norvegicus (Rat).
Eukaryota; Metazoa (Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 (Potential).
Extracellular (Potential).
Cytoplasmic (Potential).
6 (Potential).
7 (Potential).
7 (Potential).
7 (Potential).
8 (Potential).
8 (Potential).
9 (Potential).
1 (Potential).
                                                                                                                                                                        æ
                                                                                    [1] SEQUENCE FROM N.A. MEDMEd=9016353; SEQUENCE FROM N.A. SEQUENCE FROM T.P., Saugetad J.A., Kinzie J.M., Shinohara M.M., Segerson T.P., Westbrook G.L.; "Cloning and expression of rat metabotropic glutamate receptor reveals a distinct pharmacological profile.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Metabotropic glutamate receptor 8.
Extracellular (Potential).
Cytoplasmic (Potential).
2 (Potential).
2 (Potential).
3 (Potential).
6 (Potential).
4 (Potential).
4 (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             œ,
                                                                                                                                                                                                                       INTERACTION WITH PRKCABP.
INTERACTION WITH PRKCABP.
MEDLINE=20571397; PubMed=11122333;
MEDLINE=20571397; PubMed=11122333;
BI Far O., Airas J., Wischmeyer E., Nehring R.B., Karschin A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; U63288; AAB09537.1; -. HSSP; P23385; 1EWT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9908
6083
6083
6200
6411
7466
695
7768
7768
818
818
818
818
                                                                     NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHAIN
DOMAIN
TRANSMEM
DOMAIN
TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
TRANSMEM
DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
 1023
                                                                                                                                                                                                                          1083
                                                                                                                                                                                                                                                                                                                                                                                                                                     1263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1563
                                                                                                                                                                                                                                                                                             GCCCCCCCCCTTTCATCACCCCCCCTCCCAGCTGCCCATCACCTTCATCTCCCTG 1143
                                                                                                                                                                                                                                                                                                                                                                 CAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGACCCCTCCCACTCGGTGGTGGACTTC 1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCATGTACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCCATCTTTTTGGCACCTCA 1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCACCATG 1623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1624 TCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAGCTG 1683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGTGAGAACCTGGAGACCCCAGCGCTGCCTACCAAACAGACCTACGTCACCTACACCAAC 1743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  825
                                                                                                                      645
                                                                                                                                                                                          665
                                                                                                                                                                                                                                                            685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                802
                                                                                    963
                                                                                                                                                                                                                                                                                                                               705
                                                                                                                                                                                                                                                                                                                                                                                                 725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               902
                                                                                  CTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGACCTG
                                                                                                    964 GGGACCTGTTCGCTCCGCCGCATCTTCCTAGGCTCGCCATGAGCATCAGCTACGCGGCC
                GTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCAGCTACGAGCTACGTGCTG
                                                                                                                                                                        646 IlelleCysSerPhcArgArgIlePheLeuGlyLeuGlyMetCysPheSerTyrAlaAla
                                                                                                                                                                                                                                              1204 CAGGACCAACGACACTTGACCCCGCTTTGCCAGGGGCGTCCAGTCCGAACTGCGACATCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACCTGTCCCTCATCTGCCTGGGCTACAGCATGCTGTGATGGTCACGTGTACTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TyralaileLysThrargGlyValProGluThrPheAsnGluAlaLysProIleGlyPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGTCAGCCGACAAGCTGTACATCCAGACCAACCACTGACGGTCTCCGTGAGTCTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCATCCTCTTCCACCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AlaSerValSerLeuGlyMetLeuTyrMetProLysValTyrlleIleIlePheHisPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            746 AspleuSerLeulleCysSerLeuGlyTyrSerlleLeuLeuMetValThrCysThrVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MGR8_RAT STANDARD; PRT; 908 AA.
P70579;
01-N0V-1997 (Rel. 35, Created)
01-N0V-1997 (Rel. 35, Last sequence update)
05-0CT-2004 (Rel. 45, Last annotation update)
Metabotropic glutamate receptor 8 precursor (mGluR8).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATGCCATC 1752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hisserile 908
                                                  909
                                                                                                                                                                                                                        1024
                                                                                                                                                                                                                                                                                                                                                                 1144
                                                                                                                                                                                                                                                                                                                                                                                                 904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 906
                                                                                  904
                                                                                                                                                                                                                                                                                             1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
MGR8_RA
ID MG
AC P7
DT 01
DT 25
DE MG
```

셤 ઠ

FTTS

ò a

8 8 8

```
1263
                                                                                                                                                  1323
                                                                                                                                                                                               1443
                                                                                                                                                                                                                                                               1623
                                                                                                                                                                                                                                                                                      1683
                                     1023
                                                            1083
                                                                                 1143
                                                                                                       1203
                                                                                                                                                                        1383
                                                                                                                                                                                                                     1503
                                                                                                                                                                                                                                          1563
                                                 665
                                                                                                                                                             765
                                                                                                                                                                                                        805
     625
                963
                          645
                                                                                                                  725
                                                                                                                                                                                                                               825
                                                                                                                                                                                                                                                    845
                                                                                                                                                                                                                                                                          865
               CTGGCGGGCATCTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGCCGGACCTG
                                                                                 ThrmetryrthrthrcysllelletrpLeuAlaPhelleProllePhePheGlyThrAla
                                                                                                                                                                                                                    GGGACCTGTTCGCTCCGCCGCATCTTCCTAGGCCTCGGCATGAGCATCAGCTACGCGGCC
                                           ACCATGTACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCCATCTTTTTGGCACCTCA
                                                                                                                                                                                                                                                                                                                                                      MGR8_MOUSE

MGR8_MOUSE

TD MGR8 MOUSE

AC P4743;

DT 01-FEB-1996 (Rel. 33, Created)

DT 02-FEB-1996 (Rel. 33, Last sequence update)

DT 25-OCT-2004 (Rel. 35, Last annotation update)

DF Metabotropic glutamate receptor 8 precursor (mGluR8)

GN Name=Grm8; Synonyme=Gprc1h, mGluR8;

OS MUS musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                CATGCCATC 1752
      909
                           626
                                                 646
                                                            1024
                                                                       999
                                                                                  1084
                                                                                              989
                                                                                                        1144
                                                                                                                   904
                                                                                                                              1204
                                                                                                                                         726
                                                                                                                                                    1264
                                                                                                                                                              746
                                                                                                                                                                          1324
                                                                                                                                                                                     994
                                                                                                                                                                                                1384
                                                                                                                                                                                                          786
                                                                                                                                                                                                                     1444
                                                                                                                                                                                                                                908
                                                                                                                                                                                                                                           1504
                                                                                                                                                                                                                                                                 1564
                                                                                                                                                                                                                                                                            846
                                                                                                                                                                                                                                                                                      1624
                                                                                                                                                                                                                                                                                                            1684
                                                                                                                                                                                                                                                                                                                       886
                                                                                                                                                                                                                                                                                                                                  1744
                904
     4 8 4 8 6 8 6 8 6 8 6 8 6 8 6 8 6 8
                                                                                                                                                                                                      6 B 6 B 6 B 6 B
                                                                                                                                                                                                                                                                                              8 6 8 6 8
                                                                                                                                                          243
                                                                                                                                                                    405
                                                                                                                                                                               303
                                                                                                                                                                                          425
                                                                                                                                                                                                    363
                                                                                                                                                                                                                445
                                                                                                                                                                                                                           423
                                                                                                                                                                                                                                     465
                                                                                                                                                                                                                                                483
                                                                                                                                                                                                                                                           485
                                                                                                                                                                                                                                                                      543
                                                                                                                                                                                                                                                                                  505
                                                                                                                                                                                                                                                                                             603
                                                                                                                                                                                                                                                                                                                  663
                                                                                                                                                                                                                                                                                                                             545
                                                                                                                                                                                                                                                                                                                                        723
                                                                                                                                                                                                                                                                                                                                                             783
                                                                                                                                                                                                                                                                                                                                                                         585
                                                                                                                                                                                                                                                                                                                                                                                    843
                                                                                                                                                                                                                                                                                                                                                                                               605
                                                                                                                        366
                                                                                                                                    183
                                                                                                                                                                                                                                                                                                                                                                                                          903
                                                                                        63
                                                                                                            GGGGTATCATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACGGATACTTCTCC
                                                                                              ||| ::: |||||| ||| GlyalavalThrIleLeuProLysArgAlaSerIleAspGlyPheAspArgTyrPheArg
                                                                                                                                                         TACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAGAAC
                                                                                                                                                                                                                                                                                                                                              CGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGCCGTG
                                                                                                                                                                                                                                                                                                                                                                  GTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTGCTG
N-linked (GlcNAc. .) (Potential)
                                       908
436
60
85
2
                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                             (1-908)
                       MW.
                                                                             (1-1755) x MGR8_RAT
                                     2.27e-133
2371.00
85.08%
74.79%
 298
452
480
565
101866 N
                       Ą,
                                Alignment Scores:
Pred. No.:
Score:
Percent Similarity:
Query Match:
DBs:
298
452
480
565
                                                                             US-10-828-332-6
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
SEQUENCE
                                                                                       7
                                                                                                                                               367
                                                                                                                        347
                                                                                                                                                          184
                                                                                                                                                                                244
                                                                                                   327
                                                                                                              64
                                                                                                                                   124
                                                                                                                                                                                          406
                                                                                                                                                                                                                426
                                                                                                                                                                                                                           364
                                                                                                                                                                                                                                     446
                                                                                                                                                                                                                                                424
                                                                                                                                                                                                                                                           466
                                                                                                                                                                                                                                                                      484
                                                                                                                                                                                                                                                                                  486
                                                                                                                                                                                                                                                                                             544
                                                                                                                                                                                                                                                                                                        206
                                                                                                                                                                                                                                                                                                                   604
                                                                                                                                                                                                                                                                                                                             526
                                                                                                                                                                                                                                                                                                                                        664
                                                                                                                                                                                                                                                                                                                                                   546
                                                                                                                                                                                                                                                                                                                                                                         999
                                                                                                                                                                                                                                                                                                                                                                                                          844
                                                                                                                                                                    386
                                                                                                                                                                                                     304
                                                                                                                                                                                                                                                                                                                                                              724
                                                                                                                                                                                                                                                                                                                                                                                    784
```

6 8 6 8 6 8 6 8 6 8 6 8

6 6 6 6 6

g ò 음 장

```
ATTGACGCTGTGTACGCCATGGGCCACGCGCTGCCCCATGCACCGTGACCTGTCCCC 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGCACCCCAGCTGCTTAAGTAC 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAACCTTCAATGAGAACGGA 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GACGCACCGGGGCGCTACGACATCTACCAGTACCAACTGCGCAATGGCTCGGCCGAGTAC 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGCGCTACAACGATACCCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTGCTG 903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGGCGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGACCTG 963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGGTATCATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC
                                                                                                                                                                                               GlyAlaValThrIleLeuProLysArgAlaSerIleAspGlyPheAspArgTyrPheArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            484 AAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCCGCACGCTGGACAACAACAGCCGCAACATCTGGTTTGCCCGAGTTCTGGGAGGACAAC
                                                                                                                                                                                                                                                                                                                                                                                                                        AACCGAGAGCGCATCGGCCAGGACTCGGCCTATGAGCAGGAGGGGAAAGGTGCAGTTCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                 GlyLeuGluArg11eAlaArgAspSerSerTyrGluGlnGluGlyLysValGlnPheVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAGAAGACTGTGAAGGGCATGGCTTGCTGCTGCGAGCCCTGCACCGGGTACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 544 GGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCTGCCCTGCCAGCCCGGGGAGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGGCCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           crececerecresecerssisses
  2 2 8 8 9 8
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                          US-10-828-332-6 (1-1755) x MGR8_MOUSE (1-908)
84.39%
74.10%
70.72%
Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    386
                                                                                                                                                                                                    327
                                                                                                                                                                                                                                               64
                                                                                                                                                                                                                                                                                                                                     124
                                                                                                                                                                                                                                                                                                                                                                                                                          184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  626
                                           Query Match:
DB:
                                                                                                                                                        ઠે
                                                                                                                                                                                             셤
                                                                                                                                                                                                                                               ઠ
                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PIR; 149142; 149142.

R HSSF; P23185; 1EW.

R MGD; MGI:1351345; Graw

R InterPro; IPR000162; MrgIu_receptor.

R InterPro; IPR00013; Tqm.

R FEAN; PF00013; Tqm.

R FEAN; PF00013; Tqm.

R FEAN; PF00013; Tqm.

R RINTS; PR00248; GPCRMGR.

R RNSITE; PS00991; GPROTEIN RECEP F3 1; 1.

R RNSITE; PS00981; GPROTEIN RECEP F3 2; 1.

R RNSITE; PS00981; GPROTEIN RECEP F3 2; 1.

R RNSITE; PS00981; GPROTEIN RECEP F3 4; 1.

R RNSITE; PS05259; GPROTEIN RECEP F3 4; 1.

R RNSITE; RS05259; GPROTEIN RECEP F3 4; 1.

R RNSITE; RNSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
                                                                                                                                                                                                               J. Neurosci. 15:3075-3083(1995).

-!- FUNCTION: Receptor for glutamate. The activity of this receptor is mediated by a G-protein that inhibits adenylate cyclase activity.
-!- SUBUNIT: Interacts with PRKOABP (By similarity).
-!- SUBCELLULAR LOCATION: Integral membrane protein.
-!- TISSUE SPECIFICITY: Strongly expressed in olfactory bulb, accessory olfactory bulb, and mammillary body. Weaker expression in the retina, and in oscattered cells in the cortex and hindbrain.
-!- SIMILARITY: Belongs to the G-protein coupled receptor 3 family.
                                                                                                     STRAIN=C57BL/6; TISSUB=Retina;
MEDLINE=95239344; PubMed=7722646;
Duvoisin R.M., Zhang C., Ramonell K.;
"A novel metabotropic glutamate receptor expressed in the retina and
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7 (Potential).
Cytoplasmic (Potential).
N-linked (GlCNAc. .) (Potential).
MM, 4CD99D35827ED41F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Metabotropic glutamate receptor
Extracellular (Potential).
1 (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cytoplasmic (Potential).
2 (Potential).
Extracellular (Potential).
3 (Potential).
Cytoplasmic (Potential).
4 (Potential).
5 (Potential).
5 (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           o (Fotential).
Cytoplasmic (Potential).
6 (Potential).
Extracellular (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               МЖ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; U17252; AAA68149.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               101413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ä
                                                                                                                                                                                                    olfactory bulb.";
                                         NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHAIN
DOMAIN
TRANSMEM
DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
TRANSMEM
DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
CARBOHYD
                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
```

465

485 543 663

723

783 585 843 605

603 525 1023

GGGACCTGTTCGCTCCGCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCGGCC

964

ò

908

Length: Matches:

2.79e-131 2336.00

Alignment Scores: Pred. No.: Score:

```
1563
                                                                                                                                                                                                                                                                                                   1323
                                                                                                                                                                                                                                                                                                                                                                     1383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1623
                               ACCATGTACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCATCTTTTTTGGCACCTCA 1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACAGACCTACGTCACCTACACCAAC 1743
                                                                                                                                                                                                                                                                  745
                                                                                                                                                                                                                                                                                                                                                                                                      785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTGACGGTCTCGGTGAGTCTGAGC 1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          646 IleIleCysSerPheArgArgIlePheLeuGlyLeuGlyMetCysPheSerTyrAlaAla 665
                                                                                                                                                                                                                                                    ThrMetTyrThrThrCysllelleTrpLeualaPheIleProllePheGlyThrAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCCCGCGTTTCATCAGCCCGGGCCTCGCAGCTGGCCATCACCTTCATCCTCATCTCCCTG
                                                                                                                                                                   CAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGACCCCTCCCACTCGGTGGTGGACTTC
                                                                                                                                                                                                                                   CAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGCGTGCTCAAGTGCGACATCTCG
                                                                                                                                                                                                                                                                                                     GACCTGTCCCTCATCTGCCTGCTGGCTACAGCATGCTGCTGATGGTCACGTGTACTGTG
                                                                                                                                                                                                                                                                                                                       TACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGCTTC
                                                                                                                                                                                                                                                                                                                                                                                         GCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCATCCTCTTCCACCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCACCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1624 TCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=96437220, PubMed=8840028;
Makoff A., Pilling C., Harrington K., Emson P.;
"Human metabotropic glutamate receptor type 7: molecular cloning and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ol-NOV-1997 (Rel. 35, Created)
Ol-NOV-1997 (Rel. 35, Last sequence update)
25-OCT-2004 (Rel. 45, Last annotation update)
Metabotropic glutamate receptor 7 precursor (mGluR7).
Name=GRM7; Synonyms=GPRC1G, MGLUR7;
Homo sapiens (Human).
Bukaryots, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                915 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CATGCCATC 1752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hisserile 908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE=Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HUMAN
                                                                                               1084
                                 1024
                                                                                                                                                                   1144
                                                                                                                                                                                                                                   1204
                                                                                                                                                                                                                                                                                                     1264
                                                                                                                                                                                                                                                                                                                                                                     1324
                                                                                                                                                                                                                                                                                                                                                                                                                                       1384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1744
                                                                  999
                                                                                                                                  989
                                                                                                                                                                                                    904
                                                                                                                                                                                                                                                                                                                                      746
                                                                                                                                                                                                                                                                                                                                                                                                      994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MGR7 HUM
Q14831;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 10
MGR7 HUMAN
MCR7 HUMAN
AC 01483
DT 01-NO
DT 25-OC
DE METAB
GIN HOMO
OC BUKAT
OC BUKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HUMAN
                                                                요
                                                                                                                           g
                                                                                                                                                                                               a
                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ద
                               ò
                                                                                                 ઠે
                                                                                                                                                               ò
                                                                                                                                                                                                                                 ઠે
```

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAS.
                                                                                                                                                                                                                                                                                                         MEDLINE=21095249; PubMed=11163549; DOI=10.1016/S0920-9964(99)00235-2; MEDLINE=21095249; PubMed=11163549; DOI=10.1016/S0920-9964(99)00235-2; Bolonna A.A., Kerwin R.W., Munro J., Arranz M.J., Makoff A.J.; Bolonna in the genee for mGluR types 7 and 8: association studies with schizophrenia.; Schizophr. Res. 47:99-103(2001).

-!- FUNCTION: Receptor for glutemate. The activity of this receptor is mediated by a G-protein that inhibits adenylate cyclase activity.
-!- SUBCELDULAR LOCATION: Integral membrane protein.
-!- SUBCELDULAR LOCATION: Integral membrane protein.
-!- SIMILARITY: Expressed in many areas of the brain, especially in the cerebral cortex, hippocampus, and cerebellum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE; PS00979; G PROTEIN RECEP F3 1; 1.
PROSITE; PS00980; G-PROTEIN RECEP F3 2; 1.
PROSITE; PS00981; G PROTEIN RECEP F3 3; 1.
PROSITE; PS00981; G PROTEIN RECEP F3 4; 1.
G-protein coupled receptor; Glycoprotein; Multigene family; Olfaction; Polymorphism; Signal; Transmembrane.
SIGNAL 1 32
Potential.
                                                                                         MEDLINE=98141892; PubMed=9473604; DOI=10.1016/S0169-328X(97)00277-5; Wu S., Wright R.A., Rockey P.K., Burgett S.G., Arnold J.S., Rosteck P.R. Jr., Johnson B.G., Schoepp D.D., Belagaje R.M.; "Group III human metabotropic glutamate receptors 4, 7 and 8: molecular cloning, functional expression, and comparison of pharmacological properties in RGT cells."; Brain Res. Mol. Brain Res. 53:88-97(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MIM; 604101; -.

GO; GO:0005867; F: C: integral to plasma membrane; TAS.

GO; GO:0005867; F: metabotropic glutamate, GABA-B-like recepto.

GO; GO:0007194; P: negative regulation of adenylate cyclase ac.

GO; GO:0007268; P: synaptic transmission; TAS.

InterPro; IPR001828; Mrg receptor.

InterPro; IPR000162; Mtglu_receptor.

InterPro; IPR001883; Mtglu_receptor.

Pfam; PF00003; 7tm_3; 1.

Pfam; PF000094; ANF receptor; 1.

PRINTS; PR00248; GPCRMGR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Potential.
Metabotropic glutamate receptor 7.
Extracellular (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (Potential).
Cytoplasmic (Potential).
2 (Potential).
Extracellular (Potential).
3 (Potential).
Cytoplasmic (Potential).
Extracellular (Potential).
Extracellular (Potential).
5 (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cytoplasmic (Potential).
6 (Potential).
Extracellular (Potential)
7 (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cytoplasmic (Potential).
                    3rain Res. Mol. Brain Res. 40:165-170(1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (Potential)
distribution in the CNS.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; X94552; CAA64245.1; -. EMBL; U92458; AAB51763.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genew; HGNC:4599; GRM7.
MIM; 604101; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   32
915
915
615
627
627
702
772
772
775
775
810
825
850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HSSP; P23385; 1EWK.
                                                                       FROM N.A.
                                                                                                                                                                                                                                                                      [3]
VARIANT PHE-433.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             33
33
33
659
662
662
665
676
676
776
776
776
811
826
851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
TRANSMEM
DOMAIN
TRANSMEM
                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TRANSMEM
DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHAIN
```

a

ઠે

```
1140
                                                                                                                                                                                        1440
                                             1020
                                                                1080
                                                                                                                                                                    1380
                                                                                                                                                                                                           1500
                       960
                                                      671
                                                                          691
                                                                                             111
                                                                                                                                                                              791
                                                                                                                                                                                                  811
                                  651
                                                                                                                                                                                                                      831
                                                                                                                                                                                                                                         851
                                                                                                                                                                                                           CTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCG
                                                                                                                                                TTCACCATGTACACCACCTGCATTGTCTGGCTGGCTTCATCCCCATCTTTTTGGCACC
                                                                                                                                                                                                                                                                                           Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                             $
                                                                                                                                                                                                                                                                                                                                            068ED2,
068ED2;
25-OCT-2004 (TrEMBLrel. 28, C
25-OCT-2004 (TrEMBLrel. 28, L
25-OCT-2004 (TrEMBLrel. 28, L
Grm7 protein.
                                                                                                                                                                                                                                                                                                               AACCATGCCATC 1752
             612
                                             961
                                                       652
                                                                 1021
                                                                                                                                      732
                                                                                                                                                                              772
                                                                                                                                                                                                            1441
                                                                                                                                                                                                                                1501
                                                                                                                                                                                                                                                    1561
                                                                                                                                                                                                                                                                        1621
                                                                                                                                                                                                                                                                                            1681
                                                                                                                                                                                                                                                                                                                1741
                         901
                                   632
                                                                           672
                                                                                                                             1201
                                                                                                                                                1261
                                                                                                                                                          752
                                                                                                                                                                    1321
                                                                                                                                                                                         1381
                                                                                                                                                                                                  792
                                                                                                                                                                                                                      812
                                                                                                                                                                                                                                          832
                                                                                                                                                                                                                                                                                                      892
                                                                                                                                                                                                                                                             852
                                                                                                                                                                                                                                                                                 872
                                                                                                                                                                                                                                                                                                                                   RESULT 11
Q68ED2
ID Q68ED
AC Q68ED
DT 25-OC
DT 25-OC
DT 25-OC
     8 6
                     ð
                               8 8
                                                   요 당
                                                                        8 6 8 6 8 6 8
                                                                                                                                             8 6 8 6
                                                                                                                                                                                     6 6 6 6 6 6
                                                                                                                                                                                                                                                          6 6 6 6
                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                               8 8
                                                                                                                                                                                                      451
                                                                                                                                                                                                                                                                            600
                                                                                                   351
                                                                                                                       371
                                                                                                                                 183
                                                                                                                                           391
                                                                                                                                                                411
                                                                                                                                                                          303
                                                                                                                                                                                   431
                                                                                                                                                                                             363
                                                                                                                                                                                                                 423
                                                                                                                                                                                                                           471
                                                                                                                                                                                                                                     480
                                                                                                                                                                                                                                               491
                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                   511
                                                                                                                                                                                                                                                                                      531
                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                          551
                                                                                                                                                                                                                                                                                                                    720
                                                                                                                                                                                                                                                                                                                              571
                                                                                                                                                                                                                                                                                                                                        780
                                                                                                                                                                                                                                                                                                                                                  591
                                                                                                                                                                                                                                                                                                                                                            840
                                                                                                                                                                                                                                                                                                                                                                      611
                                                                                          63
                                                                                                                                                                                                                                    AGCCGCACGCTGGACAACAACAGCGCAACATCTGGTTTGCCGAGTTCTGGGAGACAAC
                                                                                                                                                     ATTGACGCTGTGTACGCCATGGCCCACGCGCTGCACGCCATGCACCGTGACCTGTGTCCC
                                                                                                                                                                                                                                                                                                ||||:::|||||||||:::
|PheAsnCysLysLowIhrIleSerGlySerLysLysGluAspThrAspArgLysCysThr
                                                                                                                                                                               CAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAG
                                                                                                                                                                                                                                                                                                                          TTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
N-linked (GlCNAc...) (Potential).
N-linked (GlCNAc...) (Potential).
N-linked (GlCNAc...) (Potential).
N-linked (GlCNAc...) (Potential).
Y -> F (in dbSNR:2234977).
FILd=VAR 003584.
MW, CFF94EÖGBF7F4919 CRC64;
                                             915
408
74
100
2
                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                (1-915)
                                                                                US-10-828-332-6 (1-1755) x MGR7_HUMAN
                              MW.
                                            2.72e-124
2219.00
82.53%
69.86%
67.18%
                              102250
                                                 Score:
Percent Similarity:
Best Local Similarity: 6:
Query Match:
1
                               Ä
                              915
                                        Alignment Scores:
Pred. No.:
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                   412
                                                                                                                                                                                             304
                                                                                                                                                                                                                364
                                                                                         7
                                                                                                                                                      184
                                                                                                                                                                         244
                                                                                                                                                                                                                           452
                                                                                                             64
                                                                                                                                 124
                                                                                                                                                                                                                                               472
                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                               552
                              SEQUENCE
                                                                                                                                                                                                                                     424
                                                                                                                                                                                                                                                                   492
                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                                                                                                         721
                                                                                                                                                                                                                                                                                                                                                            781
```

431 363 480

471

423

451

900

511

99

531

551

720

571

780

591

840

611

540

491

us-10-828-332-6.rup

```
TyrAsgGluHisLysThrMetAsnProGluGlnAlaArgGlyValLeuLysCysAspIle 751
                                                                                                                               ||||::::::||||||
TyrArgLeuIleGlyGlnTrpThrAspGluLeuGlnLeuAsnIleGluAspMetGlnTrp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACGCACCGGGGGGCGCTACGACATCTACCAGTACCAACTGCGCCAAT----GGCTCGGCCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                       541 CCAGGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCTGCCCTGCCCAGCCCGGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GlyLysGlyValArgGluIleProProSerValCysThrLeuProCysLysProGlyGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGCTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1141 CTGCAGCTGCTCGGCATCTGCGTGTGGTGGACCCCTCCCACTCGGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCCAGGACCAACGGACACTTGACCCCCCGCTTTGCCAGGGGCGTGCTCAAGTGCGACATC
       AACCGAGGGCGCATCGGGCAGGACTCGGCCTATGAGCAGGAGGGGAAGGTGCAGTTCGTG
                                   244 ATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGCCATGCACCTGTGTCCC
                                                                                                                                                                                                    GGCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGCACCCAGCTGCTTAAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGAAAGAAGACTGTGAAGGGCATGGCTTGCTGCTGCACTGCGAGCCCTGCACCGGGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTGCTGCCCCTCTTCCTGGCCGTGGTGGCCATCGCCGCCACGCTGTTCGTGGTGGTCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITGIGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1081 AGTGCCCCGCGTTTCATCAGCCCCGGCCTGGCTGGCCATCACCTTCATCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1201
            184
                                                                                                                                                                                                      304
                                                                                                                                                                                                                                                       432
                                                                                                                                                                                                                                                                                                                                                                                                        424
                                                                                                                                                                                                                                                                                                                                                                                                                                                      472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                        g
                                                                                                                                         유
                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     යි යි
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           જે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                     ઠે
                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    &
                                                                                                                     REGUENCE FROM N.A.

SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

RA SEQUENCE FROM N.A.

RA STRAIN=C57BL/6; TISSUE=Brain;

RA PUBMCed=1277932; DOI=10.1073/pnas.242603899;

RA STRAIN=C57BL/6. Feingold E.A., Grouse L.H., Derge J.G.,

RA Altschul S.F., Zeeberg B. Buetow K.H., Schaefer C.F., Bhar N.K.,

RA Altschul S.F., Zeeberg B. Buetow K.H., Schaefer C.F., Bhar N.K.,

RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heich F.,

RA Brownstein M.J., Usdin T.B., Toshiyui S., Carninci P., Prange C.,

RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

RA Richards S.W., Worley D.M., Sodergren E.J., Malek J.A., Gunaratne P.H.,

RA Richards S.W., Worley D.M., Sodergren E.J., Lu X., Gibbs R.A.,

RA Nilalon D.K., Mumy D.M., Sodergren E.J., Lu X., Gibbs R.A.,

RA Nilalon D.K., Mundy D.M., Scheurer B.D., Dickson M.C.,

RA Blakealey R. W., Touchman J.W., Green E.D., Dickson M.C.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

RA Richards S.J., Marra M.A.,

RA Generation and initial analysis of more than 15,000 full-length human man mouse cDNA sequences.",

Proc. Marl Acad Sci II S. A 99.16899.16907(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ||||::||||||||||:::
PheAsnCysLysLeuThrIleSerGlySerLysLysGluAspThrAspArgLysCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGGTATCATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TICCATIGCAAGITGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
Mus musculus (Mouse).
Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 21 | STRAIN=CS7BL/6; TISSUB-Brain; STRAIN=CS7BL/6; TISSUB-Brain; STRAIN=CS7BL/6; TISSUB-Brain; Director MGC Project; Director MGC Project; Submitted (AuG-2004) to the EMBL/GenBank/DDBJ databases. EMBL; BCO80315; AAH80315.1; -
InterPro; IPRO10183; My receptor. InterPro; IPRO10183; MgIu receptor. InterPro; IPRO10183; MgIu receptor. InterPro; IPRO1083; MgIu receptor? InterPro; IPRO1083; MgIu receptor? IPRO1094; ANF receptor? IPRO1094; 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRINTS; PRO0248; GPCKMGR.
PRINTS; PRO0257; WTABOTROPCTR.
PRINTS; PRO0193; WTABOTROPICR.
PROSITE; PS00990; G PROTEIN RECRE F3 1; 1.
PROSITE; PS00990; G PROTEIN RECRE F3 2; 1.
PROSITE; PS00990; G PROTEIN RECRE F3 4; 1.
SEQUENCE 915 AA; 102218 WW; FÖAFTAEDBFBCCF71 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  915
407
75
100
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-828-332-6 (1-1755) x Q68ED2 (1-915)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5.42e-124
2214.00
82.53%
69.69%
67.03%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
DB:
```

1020

900

631

960 651 1080

691

671

1140

711

ઠે 셤 ઠે 셤 ò

1200

731

```
US-10-828-332-6 (1-1755) x MGR7_RAT (1-915)
                                                                                                                                                                                 EMBL; D16817; BAA04092.1; -. EMBL; U06832; AAA20655.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9.4e-124
2210.00
82.53%
69.52%
66.91%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                102231
                                                                                                                                                                                                    PIR; A49874; A49874.
HSSP; P23385; 1EWK.
RGD; 619857; Grm7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                      TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                          TRANSMEM
DOMAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TRANSMEM
DOMAIN
TRANSMEM
DOMAIN
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                  TRANSMEM
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CARBOHYL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No.:
  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                       1380
                                                                               1440
                                                                                                                                                              1560
                                                                                                                                                                                                      1620
                                                                                                                      TCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTGACGGTCTCCGTGAGTCTG 1500
                                                                                                                                                                                                                                            ATGTCCAACAAGTTCACACAGAAGGCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAG 1680
                                                                                                                                                                                                                                                                                   CTGTGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACAGACCTACGTCACCTACACC 1740
                                                           791
                                                                                                                                          831
                                                                                                                                                                                  851
                                                                                                                                                                                                                         871
                                                                                                                                                                                                                                                                891
                                                                                                                                                                                                                                                                                              |||||||||||||||::::::
LeuCysGluksnValAspProAsnSerProAlaAlaLysLysLysLysTyrValSerTyrAsn 911
PheThrMetTyrThrThrCysIleValTrpLeuAlaPheIleProIlePheGlyThr
                                                                                                                                AGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCATCCTTCCAC
                                                                                                                                                                        CCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCACC
                                                                                                                                                                                                                 TTCACCATGTACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCCATCTTTTTGGCACC
                                      GTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Okamoto N., Hori S., Akazawa C., Hayashi Y., Shigemoto R., Mizuno N.,
Nakanishi S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Cloning and expression of a new member of the L-2-amino-4-phosphonobutyric acid-sensitive class of metabotropic glutamate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=20571397; PubMed=11122333; BI Far O., Alras J., Wischmeyer E., Nehring R.B., Karschin A., Betz H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Molecular characterization of a new metabotropic glutamate remgluR7 coupled to inhibitory cyclic AMP signal transduction.", J. Biol. Chem. 269:1231-1236(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN=Sprague-Dawley, TISSUE=Olfactory bulb;
MEDLINE=94195260; PubMed=8145723;
Saugetad J.A., Kinzie J.M., Mulvihill B.R., Segerson T.P.,
Westbrook G.L.
                                                                                                                                                                                                                                                                                                                                                                                                      01-JUN-1994 (Rel. 29, Created)
01-JUN-1994 (Rel. 29, Last sequence update)
25-GCT-2004 (Rel. 45, Last annotation update)
Metabotropic glutamate receptor 7 precursor (mGluR7).
Name=Grm', Synonyma=Gprc1g, Mglur7;
Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                       915 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN=Sprague-Dawley; TISSUE=Brain; MEDLINE=94117433; PubMed=8288585;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pharmacol. 45:367-372(1994).
                                                                                                                                                                                                                                                                                                                           1741 AACCATGCCATC 1752
                                                                                                                                                                                                                                                                                                                                              AsnLeuValile 915
                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INTERACTION WITH PRKCABP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         receptors.";
                                      1321
                                                          772
                                                                              1381
                                                                                                                      1441
                                                                                                                                         812
                                                                                                                                                             1501
                                                                                                                                                                                 832
                                                                                                                                                                                                   1561
                                                                                                                                                                                                                        852
                                                                                                                                                                                                                                           1621
                                                                                                                                                                                                                                                               872
                                                                                                                                                                                                                                                                                                       892
                                                                                                                                                                                                                                                                                                                                               912
                                                                                                                                                                                                                                                                                                                                                                                    MGR7 RAT
P35400;
 1261
                  752
                                                                                                                                                                                                                                                                                   1691
                                                                                                  792
                                                                                                                                                                                                                                                                                                                                                                  RESULT 12
MGR7_RAT
                  유
                                                       g
                                                                                                                                                                                                                      ద
                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                             용
                                                                                                 유
                                                                                                                                       đ
                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                   ઠ
                                      ò
                                                                              ò
                                                                                                                    ò
                                                                                                                                                             ઠ
                                                                                                                                                                              셤
                                                                                                                                                                                                  8
                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                           ઠે
```

```
InterPro; 1PR001052; Wgr.

InterPro; IPR001052; Mtglu_receptor.

InterPro; IPR001052; Mtglu_receptor.

InterPro; IPR001052; Mtglu_receptor.

InterPro; IPR001053; Mtglu_receptor.

InterPro; IPR001893; Mtglu_receptor.

InterPro; IPR001893; Mtglu_receptor.

IPR01189; PR001094; ANF receptor; I.

IPR0511E; PS00991; G_PR07EIN_RECEP_F3_1; I.

IPR0511E; PS00981; G_PR07EIN_RECEP_F3_2; I.

IPR0511E; PS50259; G_PR07EIN_RECEP_F3_2; I.

IPR0511E; PS50259; G_PR07EIN_RECEP_F3_3; I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63
                                                                                                                                                                          18
"Interaction of the C-terminal tail region of the metabotropic glutamate receptor 7 with the protein kinase C substrate PICKI.", Eur. J. Neurosci. 12:4215-4221 (2000).

Eur. J. Neurosci. 12:4216-4221 (2000).

-I- FUNCTION: Receptor for glutamate. The activity of this receptor in mediated by a G-protein that inhibits adenylate cyclase activity.

-I- SUBDANT: Interacts with PRKCABP.

-I- SUBCELLULAR LOCATION: Integral membrane protein.

-I- SUBCELLULAR LOCATION: Aidely distributed throughout the brain.

-I- SIMILARITY: Belongs to the G-protein coupled receptor 3 family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGGTATCATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (Potential). (Potential). (Potential). (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Potential.
Metabotropic glutamate receptor 7.
Extracellular (Potential).
2 (Potential).
2 (Potential).
2 (Potential).
3 (Potential).
Cyroplasmic (Potential).
4 (Potential).
6 (Potential).
5 (Potential).
5 (Potential).
5 (Potential).
7 (Potential).
6 (Potential).
7 (Potential).
7 (Potential).
7 (Potential).
8 (Potential).
7 (Potential).
7 (Potential).
7 (Potential).
8 (Potential).
7 (Potential).
7 (Potential).
8 (Potential).
7 (Potential).
8 (Potential).
7 (Potential).
8 (Potential).
7 (Potential).
8 (Potential).
9 (Potential).
1 (Potential).
2 (Potential).
3 (Potential).
4 (Potential).
6 (Potential).
7 (Potential).
8 (Potential).
8 (Potential).
9 (Potential).
9 (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       915
406
100
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indela:
```

셤

Š

ያ ያ

g

8 8 8

6666

```
1320
                                                                                                                                                                                 1380
                                                                                                                                                                                                                                                1440
                                                                                                                                                                                                                                                                                                                                                                                1560
                                                                                                                                                                                                                                                                                                                                                                                                                                               1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGTGTGAGAACCTGGAGCCCCAGCGCTGGCTACCAAACAGACCTACGTCACCTACACC 1740
                                                                                                                                                                                                                                                                                                                                                831
                                                                                                                                                 771
                                                                                                                                                                                                                 791
                                                                                                                                                                                                                                                                                                                                                                                                                 851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                              1441 TCACAGTCAGCCGACAAGCTGTACATCCAGACCACACCACAGGGTCTCCGTGAGTCTG
                                                                                                                                                                                                                                                                                                                                    1501 AGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCATCCTTCCAC
                                                                                                                                                                                                                                                                                                                                                                                                 TTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGGCGTGCTCAAGTGCGACATC
                                                                                                                  TCGGACCTGTCCCTCATCTGCCTGCTGCGCTACAGCATGCTGCTGATGGTCACGTGTACT
                                                                                                                                                                                 GTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCCAAGCCCATCGGC
                                                                                                                                                                                                  1381 TTCACCATGTACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCATCTTTTTTGGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCCAATGGGGAAGCCAAATCAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapièns (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORNES2 PRELIMINARY; PRT; 906 AA.

OBNES2;

O1-OCT-2002 (TrEMBLrel. 22, Last sequence update)

O1-OTY-2003 (TrEMBLrel. 24, Last sequence update)

O1-JUN-2003 (TrEMBLrel. 24, Last annotation update)

Metaborropic glutamate receptor 7 variant 5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AACCATGCCATC 1752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AshLeuValile
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                [1] -
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Name=GRM7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 852
                                                                                                                                                                                                                                                                                                                                                                                                                                                   1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1741
                  712
                                                 1201
                                                                                                                                                                                   1321
                                                                                                                                                                                                                 772
                                                                                                                                                                                                                                                                                  792
                                                                                                                                                                                                                                                                                                                                                812
                                                                                                                                                                                                                                                                                                                                                                                                                 832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 13
008NFS2
AC 08NFS2
AC 08NFS
DT 01-0C
DT
                                                                                                                                                                                                         8 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                           ద
                                                                                                                                        g
                                                                                                                                                                       કે
                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                       8
                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGCAGCTGCTCGGCATCTGCGTGTTCGTGGTGGACCCCTCCCACTCGGTGGTGGAC 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                691
                                                                                                                                   243
                                                                                                                                                                  411
                                                                                                                                                                                                  303
                                                                                                                                                                                                                                                                     363
                                                                                                                                                                                                                                                                                                                                    423
                                                                                                                                                                                                                                                                                                                                                                                                   480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 631
                                371
                                                                                                 391
                                                                                                                                                                                                                                   431
                                                                                                                                                                                                                                                                                                   451
                                                                                                                                                                                                                                                                                                                                                                   471
                                                                                                                                                                                                                                                                                                                                                                                                                                   491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                611
                                                                                                                                                                                                                     TyrargieuileglyglnTrpThraspGluieuGlnieuasnileGluaspMetGlnTrpT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GlyLysGlyValArgGluIleProSerSerValCysThrLeuProCysLysProGlyGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGCTCGGCATGAGCATCAGCTACGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCCGCACGCTGGACAACAACAGCCCAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC
                  TTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
                                                                                   AACCGAGAGCGCATCGGCCAGGACTCGGCCTATGAGCAGGAGGGGGAAGGTGCAGTTCGTG
                                                                                                                                                    ATTGACGCTGTGTACGCCATGGGCCACGCGTGCACGCCATGCACGTGACCTGTGTCCC
                                                                                                                                                                                                                                                                 GGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGCACCCAGCTGCTTAAGTAC
                                                                                                                                                                                                                                                                                      ATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAACCTTCAATGAGAACGGA
                                                                                                                                                                                                                                                                                                                                                 GACGCACCGGGGCGCTACGACATCTACCAGTACCAACTGCGCAAT---GGCTCGGCCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                  TACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCAGGGAGTGGCCAGCAGCTGCCATCTGCAGTCTGCCCTGCCAGCCCGGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGAAAGAAGACTGTGAAGGGCATGGCTTGCTGCTGCACTGCGAGCCCTGCACCGGGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTGCTCCCCTCTTCCTGGCCGTGGGCATCGCCGCCACGCTGTTCGTGGTGGTCACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITGIGCCCTACAACCATACCCCCATCGTCAAGGCCTCGGGCCCGGGAACTGAGCTACGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGCTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1141
                                  352
                                                                    124
                                                                                                                                   184
                                                                                                                                                                   392
                                                                                                                                                                                                    244
                                                                                                                                                                                                                                                                   304
                                                                                                                                                                                                                                                                                                   432
                                                                                                                                                                                                                                                                                                                                    364
                                                                                                                                                                                                                                                                                                                                                                   452
                                                                                                                                                                                                                                                                                                                                                                                                   424
                                                                                                                                                                                                                                                                                                                                                                                                                                  472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601
```

8 8 8

8 6 8 6

6868686

음 장

6 6 6 6 6

ઠે g ઠે g ઠે 8 8

```
1020
                                                                                                                                       1080
                                                                                                                                                                      1140
                                                                                                                                                                                                                                                              1320
                                                                                                                                                                                                   1200
                                                                                                                                                                                                                                                                                            1440
                                                                                                                                                                                                                                                                                                                                                        1500
                                                                                                                                                                                                                                                                                                                                                                                      1560
                                                                                                                                                                                                                                                                                                                                                                                                                    1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                  1680
                                                                                                                                                      691
                                              900
                                                                             960
                                                                                        651
   591
                                611
                                                             631
                                                                                                                                                                                                                  731
                                                                                                                                                                                                                                                751
                                                                                                                                                                                                                                                                              771
                                                                                                                                                                                                                                                                                                                                         811
                                                                                                                                                                                                                                                                                                                                                                      831
                                                                                                                                                                                                                                                                                                                                                                                                                                 871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                891
                                              CTGCAGCTGCTCGCCATCTGCTGGTTCGTGGACCCCTCCCACTCGGTGGAC
                                                                                                                                                                                                          valGlnLeuLeuGlyValPherleTrpPheGlyValAspProProAsnIleileIleIleAsp
                         AsnArgThrGlyCysGlnAspIleProllelleLysLeuGluTrpHisSerProTrpAla
                  GIGCIGCCCCTCTTCCTGGCCGTGGTGGCCATCCCCGCCACGCTGTTCGTGGTGGTCACG
                                                                                                                                        AGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATCACCTTCATCCTCATCTCC
                                                                                                                                                                                                                                                                        TTCACCATGTACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCATCTTTTTTGGCACC
                                                                                                                                                                                                                                                                                                                                   CCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                            TCGGACCTGTCCCTCTGCTGGCTACAGCATGCTGCTGATGGTCACGTGTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGTGTGAGAACCTGGAG 1698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TrEMBLrel. 22, C
(TrEMBLrel. 22, L
(TrEMBLrel. 24, L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 14
QBNFS3
ID QBNFS3;
AC QBNFS3;
DT 01-OCT-2002 (
DT 01-OCT-2002 (
DT 01-OT-2003 (
                                                                                                                                                                      1081
                                                                                                                                                                                                    1141
                                                                                                                                                                                                                  712
                                                                                                                                                                                                                                                                                                                                                                                                                                  852
                            592
                                                             612
                                                                                          632
                                                                                                          961
                                                                                                                        652
                                                                                                                                        1021
                                                                                                                                                      672
                                                                                                                                                                                     692
                                                                                                                                                                                                                                                               1261
                                                                                                                                                                                                                                                                              752
                                                                                                                                                                                                                                                                                             1321
                                                                                                                                                                                                                                                                                                                           1381
                                                                                                                                                                                                                                                                                                                                                                                      1501
                                                                                                                                                                                                                                                                                                                                                                                                                    1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                  1621
   572
                  781
                                              841
                                                                             901
                                                                                                                                                                                                                                  1201
                                                                                                                                                                                                                                                732
                                                                                                                                                                                                                                                                                                            772
                                                                                                                                                                                                                                                                                                                                                                                                     832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              892
                                                                                                                                                                                                                                                                                                                                          792
             6 B 6
                                                         영 음
                                                                                       g
                                                                                                    ઠે
                                                                                                                     g
                                                                                                                                   ò
                                                                                                                                                  셤
                                                                                                                                                                    δ
                                                                                                                                                                                 g
                                                                                                                                                                                              ò
                                                                                                                                                                                                             g
                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                           ద
                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                          8 8 8
                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
  용
                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                           123
                                                                                                                                                                                                                          371
                                                                                                                                                                                                                                                                                                     303
                                                                                                                                                                                                                                          183
                                                                                                                                                                                                                                                                       243
                                                                                                                                                                                                                                                                                                                                   363
                                                                                                                                                                                                                                                                                                                                                                423
                                                                                                                                                                                                                                                                                                                                                                              471
                                                                                                                                                                                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                                                                                                                                                                                            540
                                                                                                                                                                                                                                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   780
                                                                                                                                                                            391
                                                                                                                                                                                                                                                                                     411
                                                                                                                                                                                                                                                                                                                   431
                                                                                                                                                                                                                                                                                                                                                 451
                                                                                                                                                                                                                                                                                                                                                                                                                                          511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        531
                                                                                                                                                                                                                                                                                                                                                                                                            491
                                                                                                                                                                                                                                                                                                   SerargThrLeuGluAsnAsnArgArgAsnValTrpPheAlaGluTyrTrgGluGluAsn
                                                                                                                                                                                                                                                                                                                                 AGCCGCACGCTGGACAACAACAACAACAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC
                                                                                                                                                                                                                                        TTCCATTGCAAGTTGAGCCGCCACACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
                                                                                                                                                                                                                                                 ||||::|||||||||::
| PheAsnCysLysLeuThrIleSerGlySerLysLysGluAspThrAspArgLysCysThr
                                                                                                                                                                                                                                                                                                                                                               ATCAGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAACCTTCAATGAGAACGGA
                                                                                                                                                                                                                                                                                                                                                                        AACCGAGGCCATCGGCCAGGACTCGGCCTATGAGCAGGAGGGGAAGGTGCAGTTCGTG
                                                                                                                                                                                                                                                                              GACGCACCGGGGCGCTACGACATCTACCAGTACCAACTGCGCAATGGCTCG---GCCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                           TACAAGGTCATCGCTCGTGGACAGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGAAAGAACTGTGAAGGGCATGCTTGCTGCCACTGCGAGCCCTGCACCGGGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAG
                                                                                   CRC64
                                                                                                         906
401
71
92
2
                                                                                   53EC7BB83CBCBB61
                                                                                                        Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
Pfam; PF00003; 7tm_3; 1.
Pfam; PF01094; ANF receptor; 1.
Pfam; PR01262; NCD50; 1.
PRINTS; PR01269; GPCRMGR.
PRINTS; PR01057; MTABOTROPC7R.
PRINTS; PR00593; MTABOTROPICR.
PROSITE; PS00990; GPROTEIN RECEP F3_1; 1.
PROSITE; PS00980; GPROTEIN RECEP F3_2; 1.
PROSITE; PS00980; GPROTEIN RECEP F3_3; 1.
PROSITE; PS00981; GPROTEIN RECEP F3_3; 1.
                                                                                                                                                              US-10-828-332-6 (1-1755) x Q8NFS2 (1-906)
                                                                                   906 AA; 101301 MW;
                                                                                                        1.69e-122
2189.00
83.39%
70.85%
66.27%
                                                                                                                       Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                Alignment Scores:
Pred. No.:
                                                                           Receptor.
SEQUENCE
                                                                                                                                                                                                                                                                                                     244
                                                                                                                                                                                                                                                                                                                   412
                                                                                                                                                                                                          64
                                                                                                                                                                                                                                        124
                                                                                                                                                                                                                                                                      184
                                                                                                                                                                                                                                                                                     392
                                                                                                                                                                                                                                                                                                                                  304
                                                                                                                                                                                                                                                                                                                                                 432
                                                                                                                                                                                                                                                                                                                                                                364
                                                                                                                                                                                                                                                                                                                                                                             452
                                                                                                                                                                                                                                                                                                                                                                                              424
                                                                                                                                                                                                                                                                                                                                                                                                            472
                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                          492
                                                                                                                                                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   721
                                                                                                         ..
No.:
                                                                                                                Score:
```

형 호

음 &

8 & 8

රු පි

셤

ઠે

8 8 8 8 8 8

531

99

551

720

571

780 591

540 511

491

--GCCGAG

```
1261 TCGGACCTGTCCCTCATCTGCCTGCTGGCTACAGCATGCTGCTGATGGTCACGTGTACT 1320
                                                                                                           CTGGGGACTGTTCGCTCCGCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITGIGGGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCCGGGAACTGAGCTACGTG
                                                                                                                                                                                                                                                                                                                                                                                 CTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTGGACCCCTCCCACTCGGTGGTGGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTCCAGGACCAACGGACACTTGACCCCCGGCTTTGCCAGGGGGCGTGCTCAAGTGCGACATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCCAAGCCCATCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1381 TTCACCATGTACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCATCTTTTTGGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGG
                                                                          AACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                      CTGCTGGCGGCGTCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                  AGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATCATCATCTCATCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GACGCACCGGGGGGCTACGACATCTACCAGTACCAACTGCGCAATGGCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        961 (
                                                                                                                                                                                                                                                                                                                                                                                           612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1441
           424
                                  472
                                                            481
                                                                                                             541
                                                                                                                                     512
                                                                                                                                                              601
                                                                                                                                                                                      532
                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                        552
                                                                                                                                                                                                                                                                  721
                                                                                                                                                                                                                                                                                         572
                                                                                                                                                                                                                                                                                                                  781
                                                                                                                                                                                                                                                                                                                                            592
                                                                                                                                                                                                                                                                                                                                                                     841
                                                                                                                                                                                                                                                                                                                                                                                                                      901
                                                                                                                                                                                                                                                                                                                                                                                                                                              632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          812
                                                                                                                                                                                                                                                                                                                                    요
                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             요 장
           8 8 8
                                                                                                                               a
                                                                                                                                                                               Q
                                                                                                                                                                                                       8
                                                                                                                                                                                                                                   쉽
                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ⋧
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                            중 음
                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                        ે
                                                                                                                                                                                                                                                                                                                                                             ે
                                                                              RP SEQUENCE PROM N.A.

RX SEQUENCE PROM N.A.

RX SEQUENCE PROM N.A.

RX SEQUENCE STATE STA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63
                                                                                                                                                                                                     .; IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |||| :::
|GlyalalleThrIleGlnProLysArgAlaThrValGluGlyPheAspAlaTyrPheThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ||||::||||||||||::
| PheAsnCysLysLuThrIleSerGlySerLysLysGluAspThrAspArgLysChr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGGTATCATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACGGATACTTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCCGCACGCTGGACAACAACAACAACAACATCTGGTTTTGCCGAGTTCTGGGAGGACAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AACCGAGAGGGCATCGGGCAGGACTCGGCCTATGAGCAGGAGGGGAAAGGTGCAGTTCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGCCATGCACCGTGACCTGTGTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGCACCCAGCTGCTTAAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Craniata, Vertebrata, Euteleostomi,
Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                   CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        911
401
71
92
2
                                                                                                                                                                                                                                                                                                                                                                                                                                  911 AA; 101841 MW; 178DC0821EAD05E5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
 variant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-828-332-6 (1-1755) x Q8NFS3 (1-911)
receptor 7
                                  Eukaryota, Metazoa, Chordata,
Mammalia, Eutheria, Primates,
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.69e-122
2189.00
83.39%
70.85%
66.27%
Metabotropic glutamate
Name=GRM7;
                       sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
Pred. No.:
Scoret
Scoret Similarity:
Percent Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                        Receptor.
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        432
                         Ношо
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
```

1020

671

840

900

631

611

960

651

1080

691

1140

711

1200

1260

751

731

1380

791

771

1440

811

1500

431

451 423 471

```
CTGCAGCTGCTCGGCATCTGCGTGTTCGTGGTGGACCCCTCCCACTCGGTGGTGGAC 1200
                                                                                                                                                                                                                                            ATTGACGCTGTGTACGCCATGGGCCACGCGTGCACGCCATGCACCGTGACCTGTGCTCCC 303
                                                                                                                                                                                                                                                                                                                            GGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGTAGCACCCAGCTGCTTAAGTAC 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACGCACCGGGGCGCTACGACATCTACCAGTACCAACTGCGCAATGGCTCG---GCCGAG 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCCGCACGCTGGACAACAACAGCCGCAACATCTGGTTTGCCCGAGTTCTGGGAGGACAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ||||:::||||||||||::
|PheAsnCysLysLysLeSuThrIleSerGlySerLysLysGluAspThrAspArgLysCysThr
                                                                                                                                                                AACCGAGAGCGCATCGGCCAGGACTCGGCCTATGAGCAGGAGGGGGAAGGTGCAGTTCGTG
                                                                                                                                                                                     CAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            :::
ValalaValCysSerPheArgArgValPheLeuGlyLeuGlyMetCysIleSerTyrAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAACCTTCAATGAGAACGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                 |||||||||||||||||||::||||
|IeArgAsnValAsnPheAsnGlySerAlaGlyThrProValMetPheAsnLysAsnGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AACCGCACGAGCTGCCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGCTGCCCCTCTTCCTGGCCGTGGGCATCGCCGCCACGCTGTTCGTGGTGGTCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITIGIGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGCTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCG
                                                                                TTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            652
                                                                                                                      372
                                                                                                                                                                                                      392
                                                                                                                                                                                                                                              244
                                                                                                                                                                                                                                                                                                                              304
                                                                                                                                                                                                                                                                                                                                                                                                                                                    452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1141
                                          352
                                                                                                                                                                184
                                                                                                                                                                                                                                                                                      412
                                                                                                                                                                                                                                                                                                                                                                    432
                                                                                                                                                                                                                                                                                                                                                                                                          364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            632
  64
                                                                                124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        781
                         움 중 움
                                                                                                                                                   8 &
                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                            ያ ያ
                                                                                                                                                                                                                                                                                                                                                     ል ይ
                                                                                                                                                                                                                                                                                                                                                                                                                                          8 è
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               요 상
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
  1560
                                                                                  1620
                                                                                                                                                                ATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAG 1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REGUENCE FROM N.A.

**REGUENCE FROM N.A.

**
                                        851
                                                                                                                        871
                                                                                                                                                                                                      891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            63
CCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGGTATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                   QBNFS4;
01-OCT-2002 (TrEMBLrel. 22, Created)
01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-OCT-2002 (TrEMBLrel. 24, Last annotation update)
Metabotropic glutamate receptor 7 variant 3.
Name-GRM7;
Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutele
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      924
401
71
2
2
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA; 103375 MW; 32028B6156A71BFE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                      Ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-828-332-6 (1-1755) x Q8NFS4 (1-924)
                                                                                                                                                                                                                                              CTGTGTGAGAACCTGGAG 1698
                                                                                                                                                                                                                                                                                      897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1.69e-122
2189.00
83.39%
70.85%
66.27%
                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Receptor.
SEQUENCE
                                        832
                                                                                                                      852
                                                                                                                                                                                                    872
                                                                                                                                                                                                                                            1681
                                                                                1561
                                                                                                                                                              1621
                                                                                                                                                                                                                                                                                                                        RESULT 15
OBNESA
ID QUENTS
AC QUENTS
DT O1-OC
DT
ઠે
                                 셤
                                                                              ઠે
                                                                                                           셤
                                                                                                                                                            δ
                                                                                                                                                                                             셤
                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                              원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
```

600

531

491 540 511 99

551 720 571 780 591 840 611 900 631 960 651 1020

671

1080

691

1140

```
AGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCATCCTCTTCCAC 1560
           CCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCÄCCGCCGCCGCC 1620
                                                                                                                            TICACCATGIACACCACCTGCATIGICTGGCTGGCCTTCATCCCCATCTTTTTGGCACC 1440
                                                                 CTGTGTGAGAACCTGGAG 1698
                                                                                                                                                 1201
                                                                    792
                                                                                            1501
                                                                                                             1561
                                                                                                                    852
                                                                                                                            1621
                                                                                                                                    872
                                                                                                                                            1691
                             1261
                                            1321
                                                            1381
                                                                                                    832
                                                                                                                                                    892
                   8 8 8
                                         8 6 8 6
                                                                          ठे हे ठे
                                                                                                 g
                                                                                                           à
                                                                                                                  셤
                                                                                                                          ઠે
                                                                                                                                   g
                                                                                                                                            ઠે
            ò
```

Search completed: June 17, 2005, 18:51:06 Job time : 367.5 secs

Title: Perfect score:

Run on:

Sequence:

Scoring table:

Minimum DB Maximum DB

Searched:

```
A. Molecule type: mRNA
A. Residues: 1-912 < TAN>
A. Residues: 1-912 < TAN>
A. Residues: 1-912 < TAN>
A. B. Experimental sources: brain
R.O. Hara, P.J.; Sheppard, P.O.; Thogersen, H.; Venezia, D.; Haldeman, B.A.; McGrane, V., Neuron II, 41-52, 1993
Natitie: The ligand-binding domain in metabotropic glutamate receptors is related to ba. A. Reference number: 158149; MUID: 9332699; PMID: 8338667
A. A. Accession: 158149
A. Status: preliminary; translated from GB/EMBL/DDBJ
A. Residues: 1-123, R., 125-912 < RES>
A. Crosser references: GB.M90518; NID: 9205400; PIDN: AAA93190.1; PID: 9205401
C. Coment: This protein is coupled to a G protein and evokes a variety of functions by m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C. Superfamily: metabotropic glutamate receptor 4
C. Keywords: G protein-coupled receptor; glycoprotein; neurotransmitter receptor; phospho
C. Keywords: G protein-coupled receptor; glycoprotein; neurotransmitter receptor; phospho
F;1-32/Domain: signal sequence #status predicted <SIG.
F;33-912/Product: metabotropic glutamate receptor 4 #status predicted <MET.
F;655-645/Domain: transmembrane #status predicted <TII.>
F;655-675/Domain: transmembrane #status predicted <TII.>
F;700-720/Domain: transmembrane #status predicted <TIV.>
F;710-720/Domain: transmembrane #status predicted <TIV.>
F;786-807/Domain: transmembrane 
                                                                                                                                                                                                 glucan 1,4-alpha-g
mucin MUCSB, trach
antifreeze glycope
gastric mucin (clo
membrane glycoprot
membrane glycoprot
                                                                                                                                                                                                                                                                                                                                                                             glycoprotein X pre
hypothetical prote
BHLF1 protein - hu
hypothetical prote
hypothetical prote
mucin JUL7 - human
cell wall surface
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mucin 2 precursor,
hypochetical 119.5
gamma-aminobutyric
hypothetical prote
probable mucin DKF
hypothetical B2K p
DNA-directed RNA p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  proteophosphoglyca
mucin JER57 - huma
extensin homolog F
                                                                                                                                             taste receptor TIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RNA polymerase II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C; Species: Rattus norvegicus (Norway rat)
C; Species: Rattus norvegicus (Norway rat)
C; Saces 30-Jun-1992 # Bequence_revision 30-Jun-1992 # text_change 09-Jul-2004
C; Accession: JH0563; ISB149
R; Tanabe, Y: Masu, M.; Ishli, T.; Shigemoto, R.; Nakanishi, S.
Neuron 8, 169-179, 1992
A; Title: A family of metabotropic glutamate receptors.
A; Reference number: JH0561; MUID:92110002; PMID:1309649
                                                                                  calcium receptor
                                                                                                                                                                         hypothetical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       metabotropic glutamate receptor 4 precursor - rat
                                                                               A56715
D56715
JC7683
T16283
T484768
T44768
I47141
T45463
VGBSK1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   I38186
T46707
S35049
T04859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S35047
E95206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A43932
JQ0405
JE0356
T32271
T43481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      T34433
T48814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JQ0317
S21054
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
10079
308.5
308.5
308.5
308.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
209.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           212.5
210.5
210.5
209.5
207.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Gene: GLUR4
metabotropic gluta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           glutamate receptor
hypothetical prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             metabotropic gluta
metabotropic gluta
                                                                                                                                                                                           June 17, 2005, 18:27:32; Search time 67 Seconds (without alignments) 5040.610 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                   1 atgccaggggtatcatcatc.....acaccaaccatgccatctag 1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Description
                        GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                          OM nucleic - protein search, using frame plus n2p model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       283416 segs, 96216763 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0.5
0.5
0.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A46742
JH0561
JC7160
JH0562
JC2132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              149142
A49874
T30806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A42916
S71376
T27628
                                                                                                                                                                                                                                                                                                                                                                                                                                    BLOSUM62
Xgapop 10.0, Xgapext
Ygapop 10.0, Ygapext
Fgapop 6.0, Fgapext
Delop 6.0, Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 441939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           seq length: 0
seq length: 200000000
                                                                                                                                                                                                                                                                                                                      US-10-828-332-6
3303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       915
871
872
873
879
1180
11180
1119
1119
999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PIR_79:*
1: pirl:*
2: pir2:*
3: pir3:*
4: pir4:*
```

Score

Result

Database:

```
the retina and
                      GCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCCTCCTTCCACCG
                                                                                                                                                                                                                                                                 TCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAGCTG
                                                                                                                                                                                                                                                                                                                09-Jul-2004
                                               CAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGGCGTGCTCAAGTGCGACATCTCG
                                                                                                                                                                                                                   CAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTGACGGTCTCCGTGAGTCTGAGC
                                                                                                                                                                                                                         CTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGACCTG
                                                                                                                                                                                                                                                                                                                                                              RESULT 2

149142
metabotropic glutamate receptor 8 - mouse
metabotropic glutamate receptor 8 - mouse
C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Accession: 149142
R;Duvoisin, R.M.; Zhang, C.; Ramonell, K.
J. Neurosci. 15, 3075-3083, 1995
A;Title: A novel metabotropic glutamate receptor expressed in the re A;Reference number: 149142; MUID:95239344; PMID:7722646
A;Reference number: tanslated from GB/EMBL/DDBJ
A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                        CATGCCATC 1752
                                                                                                                                                                                                                                                                                                                                                    912
                                                                                                                                                                                                                                                                                                                                                  HisAlaIle
                                                                                                                                                                               770
                                                                                              1144
                                                                                                                     1204
                                                                                                                                                                                                                                                                   1564
                                                                                                                                                                                                                                                                                          1624
                                                                                                                                                                                                                                                                                                                  1684
                                                                                                                                                                                                                                                                                                                                          1744
          630
                       964
                                   650
                                               1024
                                                           670
                                                                      1084
                                                                                  69
                                                                                                         710
                                                                                                                                 730
                                                                                                                                             1264
                                                                                                                                                         750
                                                                                                                                                                     1324
                                                                                                                                                                                            1384
                                                                                                                                                                                                        790
                                                                                                                                                                                                                    1444
                                                                                                                                                                                                                               810
                                                                                                                                                                                                                                           1504
                                                                                                                                                                                                                                                      830
                                                                                                                                                                                                                                                                              850
                                                                                                                                                                                                                                                                                                      870
                                                                                                                                                                                                                                                                                                                              890
                                                                                                                                                                                                                                                                                                                                                     910
904
                                                                                                                                                                                                                                                                          8 è
                                                                                                                                                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                                                                                                  g
8 8
                   8 6 6 6
                                                                   8 8 8
                                                                                                     8 8 8 8
                                                                                                                                                     8 6 8 6 8 6
                                                                                                                                                                                                                                        8 8 8
                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                         8
:98,301,454,484,569/Binding site: carbohydrate (Asn) (covalent) #status predicted
:621,689,695,859,870/Binding site: phosphate (Ser) (covalent) #status predicted
                                                                                                                                                                                                                                                                                     509
                                                                                                                                                                                                                                                                                                            529
                                                                                                                                                                                                                                                                                                                                    549
                                                                                                                                                                                                                                                                                                                                                           569
                                                                                                                                                                                                                                                                                                                                                                                  589
                                                                                                                                                                                                                                                                                                                                                                                                          609
                                                                                                                                                                                                                                                                                                                                                                                                                      903
                                                                                                                                                                                                                                                                                                                                                                                                                                 629
                                                                                                                369
                                                                                                                            183
                                                                                                                                       389
                                                                                                                                                    243
                                                                                                                                                               409
                                                                                                                                                                           303
                                                                                                                                                                                      429
                                                                                                                                                                                                   363
                                                                                                                                                                                                              449
                                                                                                                                                                                                                         423
                                                                                                                                                                                                                                     469
                                                                                                                                                                                                                                                 483
                                                                                                                                                                                                                                                             489
                                                                                                                                                                                                                                                                        543
                                                                                                                                                                                                                                                                                                 603
                                                                                                                                                                                                                                                                                                                         663
                                                                                                                                                                                                                                                                                                                                               723
                                                                                                                                                                                                                                                                                                                                                                       783
                                                                                                                                                                                                                                                                                                                                                                                              843
                                                                            63
                                                                                                                                                                          AAGAACACTGTGAAGGGCATGGCTTGCTGCTGGACTGCGGGCCCTGCACCGGGTACCAG
                                                                                                                                                                                                                                                                                                                                               GTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCCGGGAACTGAGCTACGTGCTG
                                                                            AGCCGCACGCTGGACAACAACAGGCGCAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC
                                                                                                                                                  TTCCATTGCAAGTTGAGCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
                                                                                                                                  ATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAACCTTCAATGAGAACGGA
                                                                                                                                                                                                                                CTGCCCCTCTTCCTGGCCGTGGTGGCCATCGCCGCCACGCTGTTCGTGGTGGTCACGTTT
                       912
875
2
5
1
                       Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                 US-10-828-332-6 (1-1755) x JH0563 (1-912)
                       6.53e-191
3050.50
98.97%
98.63%
                                   Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                  ignment Scores
                                                                            5
                                                                                                    64
                                                                                                                350
                                                                                                                            124
                                                                                                                                       370
                                                                                                                                                    184
                                                                                                                                                               390
                                                                                                                                                                           244
                                                                                                                                                                                       410
                                                                                                                                                                                                   304
                                                                                                                                                                                                               430
                                                                                                                                                                                                                           364
                                                                                                                                                                                                                                     450
                                                                                                                                                                                                                                                 424
                                                                                                                                                                                                                                                             470
                                                                                                                                                                                                                                                                         484
                                                                                                                                                                                                                                                                                     490
                                                                                                                                                                                                                                                                                                 544
                                                                                                                                                                                                                                                                                                             510
                                                                                                                                                                                                                                                                                                                         604
                                                                                                                                                                                                                                                                                                                                    530
                                                                                                                                                                                                                                                                                                                                                664
                                                                                                                                                                                                                                                                                                                                                           550
                                                                                                                                                                                                                                                                                                                                                                       724
                                                                                                                                                                                                                                                                                                                                                                                   570
                                                                                                                                                                                                                                                                                                                                                                                               784
                                                                                                                                                                                                                                                                                                                                                                                                          590
                                                                                                                                                                                                                                                                                                                                                                                                                       844
                        No.:
                                                                                                             පු
                                                                                                                                    g
                                                                                                                                              ઠે
                                                                                                                                                            8 & 8
8
                                                                                                                                                                                               8 6 8 6
                                                                                                                                                                                                                                               8 8 8
                                                                                                                                                                                                                                                                                 8 8 8 8
                                                                                                                                                                                                                                                                                                                                 8 &
                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                             ò
                                                                                     g
                                                                                                   Š
                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                           ò
```

olfactory

A;Regidues: 1-908 <res> A;Cross-references: UNIPROT:P47743; EMBL:U17252; NID:g854728; PIDN:AAA68149.1; PID:g8547 C;Genetics: A;Genetics: A;Gene: mGlun8 C;Superfamily: metabotropic glutamate receptor 4 C;Keywords: neurotransmitter receptor</res>	844 GTGCGCTACAACGCTCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTCGTG 90
Alignment Scores: Pred. No.: Scores: 2.18e-144 Length: 908 Score: 2.336.00 Matches: 432 Percent Similarity: 84.394 Conservative: 60 Best Local Similarity: 74.104 Mismatches: 89	626 LeuintsLyllePhoLeucy81yFSerileInrPhoLeuwectleAlaAlaFloAspinr 964 GGGACCTGTTCGCCCCCCACTTTCTAGGCCTCGGCATGAGCATCAGCTACGCGCC
indels: Gaps: 2 (1-908)	1024 CTGCTGACCAAGACCACGCATTTACCGCATCTTTGAGCAGGGCAAACGGTCAGT
Qy 7 GGGGTATCATCATCTTTGCCAACGAGGATGACATCAGGGTTGGACGATACTTCTCC 63	<pre>Qy 1084 GCCCGCGTTTCATCAGCCGCCTCGCAGCTGGCCATCACCTTCATCCTCATCTCCTG 1143</pre>
	1144 CAGCTGGTCGGCATCTGGGTTCGTCGTGGACCCCTCCCACTCGGTGGTGGACTTC
38 8	1204 CAGGACCAACGGACACTTGACCCCGCTTTGCCAGGGGGTGCTCAAGTGCGACATCTCG :::
Oy 184 AACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCAGGGGAAGGTGCAGTTCGTG 243	1264 746
Qy 244 ATTGACGCTGTGACGCCATGGGCCACGGCTGCACGCCATGCACCTGTGTCCC 303	OY 1324 TAGGCCATCAAGACCGAGGCGTGCCGAGACCTTCAAGGAGGCCATCGGCTTC 1383
304 GGCCGCTAGGACTCTGCCTCGCATGGACCCCGTGGATGGCACCCAGCTGCTTAAGTAC	- 6
ATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAACCTTCAATGAGAACGGA	Qy 1444 CAGTCAGCCGACAAGCTGTACATCCAGACAACCACTGACGGTCTCGTGAGTCTGAGC 1503 :: ::
454 GAGGCACGGGGGGTACATCAGATACCAACTGCGAATGGCTGGGCGGGTACGTAC	Qy 1504 GCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCCTCTTCCACCGG 1563
484 AAGGTCATCGGCTCGTGCACCTCTCACAATACAGCGGTTCCACTGCCCACAATACAGCGGTTCCACTGCCCACAATACAGCGGTTCCACTGCCCACAATACAGTCTACACTGCTCACATACAGTTCACTGCACTGCCCACAATACAA	Oy 1564 GAGCAGAACGTGCCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCACCATG 1623 Db 846 GluGlnAsnValGlnLysArgLysArgSerPheLysAlvalValValThrAlaAlaThrMet 865
544 GGGAGTGGCCAGCTCCATCTGCAGTCTGCCCTGCCAGGGAGGAGGAGAGGAGAGGAGAGGAGAGGAGAGGAG	1624 TCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAGCTG :::
Qy 604 AAGAAGACTGTGAAGGCATGCTGCTGCACCGGAGCCTGCACCGGGTACCAG 663	1684 TGTGAGAACCTG ::: 886 CysGluSerLeu
	Oy 1744 CATGCCATC 1752 :: Db 906 HisSerile 908
Qy 724 CGCACGAGCTGCCATCCCCATCGTCAAGTTGGAGTCGCGACGCGTG 783	RESULT 3 A49874 metabotropic glutamate receptor 7 - rat N,Alternate names: metabotropic glutamate receptor mGluR7
Qy 784 CTGCCCCTCTTCCTGGCCGTGGCATCGCCGCCACGTTTCGTGGTCACGTTT 843 ::: ::: ::: ::: :::	C;Species: Rattus norregicus (Norway rat) C;Species: Vall-1996 #sequence_revision 02-Jul-1996 #text_change 09-Jul-2004 C;Accession: A49874; I57954 R;Okamoto, N.; Hori, S.; Akazawa, C.; Hayashi, Y.; Shigemoto, R.; Mízuno, N.; Nakanishi, J. Biol. Chem. 269, 1231-1236, 1994

551

```
CTGTGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACAGACCTACGTCACCTACACC 1740
                                                                                                                                                                                                                                                                                     ||||||||||||||::::|
LeuCysGluAsnValAspProAsnSerProAlaAlaLysLysLysTyrValSerTyrAsn
      ArglyslysThrGlnLysGlyThrProCysCysTrpThrCysGluProCysAspGlyTyr
                                                CTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCG
                                                                                                                                                                                                                                                                                                                                              TOGGACCTGTCCCTCATCTGCCTGCTGCTACAGCATGCTGCTGATGGTCACGTGTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCCAAGCCCATCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1441 TCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTGACGGTCTCCGTGAGTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGTCCAACAAGAAGACAAAGGCCAACTTCAGGCCCCAATGGGGAAGCCAAATCAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAG
                                                                                           AACCGCACGAGCTGCCAGCCCATCCTCAAGTTGGAGTGGGACTCGCCGTGGGCC
                                                                                                                                                     GTGCTGCCCCTCTTCCTGGCCGTGGTGGCCATCGCCGCCACGCTGTTCGTGGTGGTCACG
                                                                                                                                                                                                              TITGIGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGGCGAACTGAGCTACGTG
                                                                                                                                                                                                                           CTGCTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGAC
                                                                                                                                                                                                                                                                                                                                                                                         1381 TTCACCATGTACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCATCTTTTTGGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1501 AGGGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCATCCTCTTCCAC
                                                                                                                                                                                                                                                                                                                                                                                                         852
                                                                                                                                                                                                                                                                                                                                                                                                                  672
                                                                                                                                                                                                                                                                                                                                                                                          1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1621
                                   661
                                                              552
                                                                                           721
                                                                                                                       572
                                                                                                                                                     781
                                                                                                                                                                                  592
                                                                                                                                                                                                               841
                                                                                                                                                                                                                                                                        901
                                                                                                                                                                                                                                                                                                     632
                                                                                                                                                                                                                                                                                                                                961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8 6 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                        ద
                                                                                                                셤
                                                                                                                                                                            원
                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                              8 8
                                                                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                           요 상
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               유
장
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6 6 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               පු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                         ò
                                                                                           ઠે
                                                                                                                                            8
                                                                                                                                                                                                            õ
A; Reference number: A49874; MUID:94117433; PMID:8288585
A; Recession: A49874
A; Reterence number: A49874; MUID:94117433; PMID:8288585
A; Accession: A49874
A; Accession: A49874
A; Accession: A49874
A; Cross-references: UNIPROT: P35400; GB:D16817; NID:9458728; PIDN:BAA04092.1; PID:9458728
A; Cross-references: UNIPROT: P35400; GB:D16817; NID:9458728; PIDN:BAA04092.1; PID:9458728
A; Cross-references: UNIPROT: P35400; GB:D16817; NID:9458728; PIDN:BAA04092.1; PID:9458728
A; Title: Cloning and expression of a new member of the L-2-amino-4-phosphonobutyric acid A; Reference number: 157954; MUID:94195260; PMID:8145723
A; Cross-references: EMBL:U06832; NID:9459657; PIDN:AAA20655.1; PID:9459658
C; Genetics:
A; Genetics:
A; Genetics:
A; Genetics:
A; Genetics:
A; Cross-references: EMBL:U06832; NID:9459657; PIDN:AAA20655.1; PID:9459658
C; Genetics:
A; Genetics:
A; Genetics:
A; Genetics:
A; Genetics:
A; Genetics:
A; Cross-references: EMBL:U06832; NID:9459657; PIDN:AAA20655.1; PID:9459658
C; Genetics:
A; Genetics:
A; Genetics:
A; Genetics:
A; Genetics:
A; Cross-references: EMBL:U06832; NID:9459657; PIDN:AAA20655.1; PID:9459658
C; Genetics:
A; Gen
      cont
                                                                                                                                       acid
                                                                                             PID:9458729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ||||::||||||||||:::
PheAsnCysLysLeuThrIleSerGlySerLysLysGluAspThrAspArgLysCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GlyLysGlyValArgGlulleProSerSerValCysThrLeuProCysLysProGlyGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGGTATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACGGATACTTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GlyAlalleThrIleGlnProLysArgAlaThrValGluGlyPheAspAlaTyrPheThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCCGCACGCTGGACAACAACGCGCAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AACCGAGAGCGCATCGGCCAGGACTCGGCCTATGAGCAGGAGGGGAAGGTGCAGTTCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTGACCCTGTGTACGCCATGGCCCACGCCTGCACGCCATGCACCGTGACCTGTGTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGCCGCGTAGGACTCTGCCTCGCATGGACCCCGTGGATGGCACCCCAGCTGCTTAAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAAACCTTCAATGAGAACGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |||||||::|||||||||::|||
|IleArgHisValAsnPheAsnGlySerAlaGlyThrProValMetPheAsnLysAsnGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GACGCACCGGGGCGCTACGACATCTACCAGTACCAACTGCGCAAT---GGCTCGGCCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | TACAAGGTCATCGGCTCGTGGACAGACCACCTGCACAGAATAGAGCGGATGCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCAGGGAGTGGCCGCCGCGCGCCCATCTGCAGTCTGCCCTGCCAGCCCGGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGAAAGAAGACTGTGAAGGGCATGGCTTGCTGCTGCGAGCCCTGCGAGCCCTGCGGTAC
                                                                                                                                                                                                                                                                                                                               915
406
76
100
2
                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-828-332-6 (1-1755) x A49874 (1-915)
                                                                                                                                                                                                                                                                                                                                3.49e-136
2210.00
82.53%
69.52%
66.91%
                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                  Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8 6 8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
```

1140

1200

731

1260

751

1320

771

1380

791

1440

1500

831

811

1560

1620

871

851

1680

891

911

1020

651

900 631 960

611

1080

691

Jun

Wed

```
1002
                                                                                                                                                                                                                                                                                                                                                                    1062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTGCTCAAGTGCGACATCTCGGACCTGTCCCTCATCTGCCTGGCTACAGCATGCTG 1302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1602
                                                                                                                                                                                                                                                                                                                                                                                               340
                                                                                                                                                                                                                                                                                                                                                                                                                           CAGGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATC 1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCTTCATCCTCATCTCCCTGCAGCTGCTCGCCATCTGCGTGGTTCGTGGTGGACCCC 1182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1183 TCCCACTCGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCCGCTTTGCCAGGGG 1242
                                                                                762
                                                                                                            240
                                                                                                                                        822
                                                                                                                                                                                                                                                                                                                          440
                                                                                                                                                                  260
                                                                                                                                                                                                882
                                                                                                                                                                                                                         280
                                                                                                                                                                                                                                                      942
                                                                                                                                                                                                                                                                     400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              520
                                                                                                                                                                                             ThrPhelleLeulleSerValGlnLeuLeuGlyValPhelleTrpPheGlyValMetPro
ProCysGluSerGlyGluArgLysLysMetValLysGlyValProCysCysTrpHisCys
                                          GACATGCGGCCCACAGAGCGGCACGAGCTGCCAGCCCATCCTCAAGTTGGAG
                                                                                                                                        TGGACTCGCCGTGGCCGTGCTGCCCCTCTTCCTGGCCGTGGGCATCGCCGCCACG
                                                                                                                                                                                                                                                                                                                                                                   ATGAGCATCAGCTACGCGGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGATGGTCACGTGTACTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAAC
                           GAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTAC
                                                                                                                                                                                                                                                      CGGGAACTGAGCTACGTGCTGCGGGGCATCTTTCTGTGTGCTACGCCACTACCTTCCTC
                                                                                                                                                                                                                                                                                                              ATGATCGCAGAGCCGGACCTGGGGGACCTCGCTCCGCCGCATCTTCCTAGGGCTCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCCAAAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTGGTCACCGCCCCCATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGGAAGCCAAATCAGAG 1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ||||||||:::|||
GlyGluSerLyBIleGlu
                                                                                                           221
                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                    1003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1663
 181
                                                                                703
                                                                                                                                        763
                                                                                                                                                                                                823
                                                                                                                                                                                                                            261
                                                                                                                                                                                                                                                                                                              943
                                                                                                                                                                                                                                                                                                                                                                                               321
                                                                                                                                                                                                                                                                                                                                                                                                                           1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                       341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1543
                           643
                                                    201
                                                                                                                                                                                                                                                      883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                    ò
                                          6 ይ
                                                                                                      名
                                                                                                                                       ઠ
                                                                                                                                                           셤
                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                    පු
                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                              음 중 음
                                                                                                                                                                                                                                                                                                                                                                                                                  8 B 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ሪ ይ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          중 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    중 옵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         පි රි
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                         metabotropic glutamate receptor 7 - Fugu rubripes (fragment)
C;Species: May rubripes
C;Date: 02-Sep-2000 #sequence_revision 02-Sep-2000 #text_change 09-Jul-2004
C;Accession: T30806
R;Cotage, A.J.; Clark, M.; Hawker, K.; Umrania, Y.; Wheller, D.; Bishop, M.; Blgar, G. FEBS Lett. 443, 370-314, 1999
A;Title: Three receptor genes for plasminogen related growth factors in the genome of th A;Accession: T30806, MUID:99148833; PMID:10025966
A;Accession: T30806, MUID:99148833; PMID:10025966
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-551 <COT>
A;Cross-references: UNIPROT:Q9PWQ0; EMBL:AJ010317; NID:e1355235; PID:e1355236; PIDN:CAAG
C;Genetics:
A;Genetics:
A;Gen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCGACCGATACTTCTCCAGCCGCACGCTGGACACACAGCGCGCAACATCTGGTTTGCC 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAT---GGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAGA 522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATAGAGCGGATGCAGTGGCCAGGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCTG 582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GlyargarglyscysthrGlyaspGluarglleSerargaspSerGlnTyrGluGlnGlu 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 GlyLygValGlnPheVallleAspAlaValTyrAlaMetAlaHisAlaLeuHisSerMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCTGCCAGCCCGGGGAGCGAAAGAACACTGTGAAGGGCATGGCTGCTGCTGGCACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CACATCAAGAAGTGCACCAACCGAGGCGCATCGGGCAGGACTCGGCCTATGAGCAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGAAGGTGCAGTTCGTGATTGACGCTGTACGCCATGGGCCACGCGCTGCACGCCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CACCGTGACCTGTGTCCCGGCGCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTA
                                                                                                                                                                                                                                                                                                                                                                    551
376
82
87
1
                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-828-332-6 (1-1755) x T30806 (1-551)
                                                                                                                                                                                                                                                                                                                                                                 8.79e-130
2111.50
83.88%
68.86%
63.93%
             AACCATGCCATC 1752
                                       915
                                   AshLeuValile
                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
Pred. No.:
                                       912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8 & 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8 8 8 8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
```

ø

```
CTGCCTGCTGGGCTACAGCATGCTGATGGTCACGTGTACTGTGTACGCCATCAAGAC 1337
                                                                                                   ePheGlnTyrGlnAlaThrAsnGlySerAlaSerSerGlyGlyTyrGlnAlaValGlyGl
                                                                                                                                                                                                |||||||||:::||||||
uAlaValLeuGlyIleMetAlaThrThrThrIleMetAlaThrPheMetArgHisAsnAs
                                                                                                                                                                                                                                                                                                            TCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGACCTGGGGACCTGTTCGCT
                                                                                                                                                                                                                                                                                                                         CAGCCCGGCCTCGCAGCTGGCCATCACCTTCATCCTCCTCCTGCAGCTGCTCGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGCGTGTGGTTCGTGGTGGTCCCTCCCACTCGGTGGTGGTGGTCCTTCCAGGACCAACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1218 ACTIGACCCCCCCCTTIGCCAGGGCGTGCTCAAGTGCGACATCTCGGACCTGTCCCTCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |-::|||||||
726 rValAspProGluGlnAlaArgGlyValLeuLysCysAspMetSerAspLeuSerLeull
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1338 CCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGCTTCACCATGTACACCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               aArgGlyValProGluThrPheAsnGluAlaLysProlleGlyPheThrMetTyrThrTh
                     GTGGACAGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGGCCAGGGAGTGGCCAGGCA
                                                             GCTGCCGCGCTCCATCTGCAGTCTGCCAGCCCGGGGAGCGAAAGAAGAAGAATGTGAA
                                                                        CTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAGAACCGCACGAGGAGCTGCCA
                                                                                                                                                                                    GCCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGCCGTGCTGCCCCTCTTCCT
                                                                                                                                                                                                                            GGCCGTGGTGGCCGCTTTCGTGGTGGTGGTCACGTTTGTGCGCTACAACGA
                                                                                                                                                                                                                                                                    TACCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTGCTGCTGCGGGGCATCTT
                                                                                                                                                                                                                                                                                1278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1398
                     498
                                         486
                                                              558
                                                                                 206
                                                                                                     618
                                                                                                                                              678
                                                                                                                                                                                     738
                                                                                                                                                                                                          999
                                                                                                                                                                                                                             798
                                                                                                                                                                                                                                                 586
                                                                                                                                                                                                                                                                      858
                                                                                                                                                                                                                                                                                         909
                                                                                                                                                                                                                                                                                                            918
                                                                                                                                                                                                                                                                                                                                 626
                                                                                                                                                                                                                                                                                                                                                      978
                                                                                                                                                                                                                                                                                                                                                                         646
                                                                                                                                                                                                                                                                                                                                                                                              1038
                                                                                                                                                                                                                                                                                                                                                                                                                  999
                                                                                                                                                                                                                                                                                                                                                                                                                                      1098
                                                                                                                                                                                                                                                                                                                                                                                                                                                        989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                826
                                                                                                                                                                                                                                                                                                                                                                                                             8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6 6 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                    8 & 8
                                                                                                                                                                               6 6 6
                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                  8 8 8
                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                   요 요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ያ ያ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
  8 8
                                   8 6 8
                                                                                              ò
        RESULT 5

A46742

metabotropic glutamate receptor, mGluR6 - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 21-Sep-1993 #sequence_revision 18-Nov-1994 #text_change 09-Jul-2004
R;Nakejima, Y.; Iwakabe, H.; Akazawa, C.; Nawa, H.; Shigemoto, R.; Mizuno, N.; Nakanishi
J. Biol. Chem. 268, 11868-11873, 1993
A;Title: Molecular characterization of a novel retinal metabotropic glutamate receptor m
A;Reference number: A46742; MUID: 93280152; PMID: 8389366
A;Accession: A46742
A;Status: preliminary
A;Status: preliminary
A;Status: preliminary
A;Residues: 1-81
A;Residues: 1-81
A;Residues: 1-81
A;Roserimental source: retina
A;Note: sequence extracted from CBI backbone (NCBIN:133246, NCBIP:133250)
C;Superfamily: metabotropic glutamate receptor 4
C;Keywords: G protein-coupled receptor; transmembrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        497
                                                                                                                                                                                                                                                                                                                                                                                                                            326
                                                                                                                                                                                                                                                                                                                                                                                    rArgGlnAlaAsnLeuThrGlyHisPheLeuTrpValGlySerAspSerTrpGlySerLy 306
                                                                                                                                                                                                                                                                                                                        42
                                                                                                                                                                                                                                                                                                                                                                 42
                                                                                                                                                                                                                                                                                                                                                                                                        42
                                                                                                                                                                                                                                                                                                                                                                                                                                               98
                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCACGCGCTGCACGCCATGCACCCTGTGTCCCGGCCGCGTGAGGACTCTGCCCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BIleSerProIleLeuAsnLeuGluGluGluAlaValGlyAlaIleThrIleLeuProLy
                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCGCAACATCTGGTTTTGCCGAGTTCTGGGACGACAACTTCCATTGCAAGTTGAGCCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGCGCTCAAGAAGGAAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCGGCCTATGAGCAGGAGGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATGGACCCCGTGGATGGCACCCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATTGCGGGGAACCCTGTAACCTTCAATGAGAACGGAGACGCACCGGGGCGCTACGACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCAGGGGTATCATCTTTGCCAACGAGGATGACATCA----
                                                                                                                                                                                                                             871
379
62
97
56
                                                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                     (1-871)
                                                                                                                                                                                                                            3.09e-124
2026.50
74.24%
63.80%
61.35%
                                                                                                                                                                                                                                                                                                     US-10-828-332-6 (1-1755) x A46742
                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                    Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                         ო
                                                                                                                                                                                                                                                                                                                                            267
                                                                                                                                                                                                                                                                                                                                                                  42
                                                                                                                                                                                                                                                                                                                                                                                                        42
                                                                                                                                                                                                                                                                                                                                                                                                                             306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         447
                                                                                                                                                                                                                                                                                                                                                                                                                                                 43
                                                                                                                                                                                                                                         Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8 6 8 6
                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                ብ ራ
                                                                                                                                                                                                                                                                                                                                                                                                                        ద
                                                                                                                                                                                                                                                                                                                                                                                                                                        8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
```

 ઠે 유

```
GTGCCCGAGACCTTCAACGAGGCCAACCCATCGGCTTCACCATGTACACCACCTCCATT 1404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCGGCCCTGCTGACCAAGACCAACCGC 1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATITACCECATCTITGAGCAGGCAAACGGTCGGTCAGTGCCCCCCCGCGTTTCATCAGCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCTCGCAGCTGGCCATCACCTTCATCCTCATCTCCCTGCAGCTGCTCGGCATCTGCGTG 1164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGTTCGTGGTGGACCCCTCCCACTCGGTGGACTTCCAGGACCAACGGACACTTGAC 1224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCCGCTTTGCCAGGGGGGTGCTCAAGTGCGACATCTCGGACCTGTCCCTCATCTGCCTG 1284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGGGCTACAGCATGCTGATGGTCACGTGTACTGTACGCCCATCAAGACCCGAGGC 1344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTCTGGCTGGCCTTCATCCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTAC 1464
                                  458
                                                                     510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          919
                                                                                                                                                                                                                                                                                                                                                       744
                                                                                                                                                                                                                                                                                                                                                                                                                            804
                                                                                                                                                                                                                                                                                                                                                                                                                                              864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              929
                                                                                                                                                                         496
                                                                                                                                                                                                              624
                                                                                                                                                                                                                                                                                 684
                                                                                                                                                                                                                                                                                                                  536
                                                                                                                                                                                                                                                                                                                                                                                       556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ::: ||| |||::: |||: || AspGluValArgPheAspArgPheGlyAspGlyIleGlyArgTyrAsnIlePheThrTyr
                                                                                                                                                            CGCTCCATCTGCAGTCTGCCCTGCCAGCCCGGGAGCGAAAGAAGAAGACTGTGAAGGCCATG
                                                                                                                                                                                                                                    517 ValCysCysTrpLeuCysIleProCysGlnProTyrGluTyrArgLeuAspGluPheThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ||| |||||||:: ||||
TrpLeuValValGluAlaProGlyThr-------GlyLy8GluThrAlaPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ||| ||| |||::::::
| GluArgArgGluValValThrLeuArgCysAsnHisArgAspAlaSerMetLeuGlySer
                                                                     CAACTGCGCAATGGCTCGGCCGAGTACAAGGTC----ATCGGCTCGTGGACAGACCAC
                                                                                                      ---LeuArgAlaGlySerGlyArgTyrArgTyrGlnLysValGlyTyrTrpAlaGluGly
                                                                                                                                                                                                                                                                                 GCTTGCTGCTGGCACTGCGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACC
                                                                                                                                                                                                                                                                                                                                                       CCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGCCGTGCTGCCCCTCTTCCTGGCCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGCACCTCAGAATAGAGCGGATGCAGTGG-----CCAGGGAGTGGCCAGCAGCTGCCG
   <u>AACCCTGTAACCTTCAATGAGAACGGAGACGCACCGGGGCGCTACGACATCTACCAGTAC</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTGCTGCTGGCGGGCCATCTTTGTGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TACGCCACTACCTTCCTCATGATCGCAGAGCCGGGACCTGGGGACCTGTTCGCTCCGCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1345
                                                                                                        459
                                                                                                                                                                           478
                                                                                                                                                                                                              565
                                                                                                                                                                                                                                                497
                                                                                                                                                                                                                                                                                   625
                                                                                                                                                                                                                                                                                                                                                       685
                                                                                                                                                                                                                                                                                                                                                                                                                                                             557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1405
                                                                     457
                                                                                                                                          511
                                                                                                                                                                                                                                                                                                                                                                                         537
                                                                                                                                                                                                                                                                                                                                                                                                                              745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              772
   397
   8 8
                                                          8 &
                                                                                                                                       ò
                                                                                                                                                              용
                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                ద
                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6 6 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ያ
የ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                              metabotropic glutamate receptor 2 precursor - rat
Cispecies Rattus norvegicus (Norway rat)
Cispecies sattus norvegicus (Norway rat)
Cispecies sattus norvegicus (Norway rat)
Cispecies 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 09-Jul-2004
Cisaces 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 09-Jul-2004
Cisaces and the sequence_revision of the sequence of th
                                                                                                                                                                                                                                                                                                                                                                           prot
                                                                                                                                                                                                                                                                                                                                    ል
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     70 ACGCTGGACAACAACAGCGCAACATCTGGTTTGCCGAGTTCTGGGAGACAACTTCCAT 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGCAAGTTG------AGCCGCCACGCGCTCAAGAAGGAAAGCACATCAAG 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAGTGCACCAACCGAGGGCATCGGGCAGGACTCGGCCTATGAGCAGGAGGGAAGGTG 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    :::||||||||||||:::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGTICGIGATIGACGCIGIGIACGCCAIGGGCCACGCGCIGCACGCCAIGCACGGIGAC 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         419 TyrLysAspPheValLeuAsnValLysPheAspAlaProPheArgProAlaAspThrAsp 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AspProTrpAsnAsnSerArgAsnProTrpPheArgGluPheTrpGluGluArgPheHis 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTATCATCATCTTTGCCAACGAGGATGACATCAGGGTTCGACCGATACTTCTCCAGCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ::: |||| CysSerPheArgGlnArgAspCysAlaAlaHisSerLeuArgAla-----------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGCACCCAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1617
                                    859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          872
249
75
1197
110
Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-828-332-6 (1-1755) x JH0561 (1-872)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.45e-68
1171.50
57.65$
44.31$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
Pred. No.:
 1578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                355
```

ò 셤 ઠે 유 ò 요 Š 8 8 පු ઠે 용 δ 셤

534

594

654

414

us-10-828-332-6.rpr

```
IGTACTGTGTAGGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCC 1374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1015 TACGCGGCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGAGCAGGCAAACGG 1074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACATCTCGGACCTGTCCTCTTGCCTGCTGGGCTACAGCATGCTGATGGTCACG 1314
                      CTCTGCCCTCGCATGGACCCCGTGGATGGCACCCAGCTTAAG---TACATCAGGAAC 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        516 AsnGluMetLysAsnMetGlnProGlyAspValCysCysTrp1leCys1leProCysGlu 535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ||||::|||||| ||||:::
TyrlleLeuLeuPheGlyValSerLeuSerTyrCysMetThrPhePhePhelleAlaLys 635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               636 ProSerProVallleCysAlaLeuArgArgLeuGlyLeuGlyThrSerPheAlalleCys 655
                                                                                                                                                                                                                                                                    GAGAACGGAGACGCACCGGGGCGCTACGACATCTACCAGTACCAACTGCGAATGGCTCG 474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTCACGITIGICGGCTACCAACGATACCCCCCATCGTCAAGGCCTCGGGCCGGGGAACTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ThrValPheIleLygHisAsnAsnThrProLeuValLysAlaSerGlyArgGluLeuCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TACGTGCTGCTGGCGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               :::|||||||::
IleAsnPheThrAlaProPheAsnProAsnLysGlyAlaAspSerIleValLysPheAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HisTrp-----SerArgAsnSerValProThrSerGlnCysSerAspProCysAlaPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGGAGCGAAAGAAGACTGTGAAGGGCATGGCTTGCTGCTGGCACTGCGAGCCCTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACAGAGAACCGCACGAGCTGCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ||| ::: ::: ||| :::| || ThralaAspLeuSerGlyCysTyrAsnLeuProGluAspTyrIleArgTrpGluAspAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Teseccerecrececerereceses and a second contest of the second contes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |||||||::: |||::: :::|||
TrpAlaIleGlyProValThrIleAlaCysLeuGlyPheMetCysThrCysIleValIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCGGACCTGGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GlyalaGlnArgProLysPheIleSerProSerSerGlnValPheIleCysLeuGlyLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1135 ATCTCCCTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGACCCCTCCCACTCGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTGGACTTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGGCGTGCTCAAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ::: |||||||||||||------ArgArgTyrThrLeuProGluLysArgGluThrVallleLeuLysCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            :::::: ||| |||::::::
AsnVallysAspSerSerMetLeulleSerLeuThrTyrAspValValLeuVall1eLeu
                                                                                                                                GCGGGGAACCCTGTAACCTTCAAT
                                                                                                                                                                                                                                                                                                                                                    GCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAGAATAGAGCGGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1075 TCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATCATCTTCATCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGTGGCCAGGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCTGCCCTGCCAGCCC
                                                                                                                                GTCAACTTCTCAGGCATT---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1255
                      316
                                                                          418
                                                                                                                                373
                                                                                                                                                                                       138
                                                                                                                                                                                                                                          115
                                                                                                                                                                                                                                                                                                   158
                                                                                                                                                                                                                                                                                                                                                                                                          178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ብ &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8 & 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ∂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8 G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                            g
                                                                                                                        8 8 8
                                                                                                                                                                                                                                                                               8 8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8 & 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8 6 6 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                $ 8 $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                        McCrise

Cispecies: Mus musculus (house mouse)

Cispecies: Mus musculus (house mouse)

Cispecies: Mus musculus (house mouse)

Cispecies: Mara-2000 #sequence_revision 04-Mar-2000 #text_change 11-May-2000

Cispecies: John 107160

RiMinoshima. T: Nakanish; S.
J. Biochem. 126, 889-886, 1999

A;Title: Structural organization of the mouse metabotropic glutamate receptor subtype 3

A;Accession: UC7160, MUID: 20012997; PMID:10544282

A;Accession: UC7160

A;Molecule type: DNA

A;Residues: 1-879 AMIN>

A;Cross-references: GB:AF170696

Cigenetics: A;Genetics: A;Genet
ATCCAGACAACCACACTGACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATG 1524
                                                                                                                                                                                                                                                GACAACAACAGGCGCAACATCTGGTTTGCCGAGTTCTGGGAGGACAACTTCCATTGCAAG 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ||||||| |||||| |||||| :::|||||||||
TyrAsnAsnHisArgAsnProTrpPheArgAspPheTrpGluGlnLysPheGlnCysSer 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTCTACATGCCCAAAGTCTACATCATCCTTCCACCGGAGCAGAAGGTGCCCAAGCGC
                                                                                                                                                                                                                   AAGCGCAGTCTCAAAGCCGTGGTCACCGCCCCCCATGTCCCAACAAGTTCACACAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCATCTTTGCCAACGAGGATGACATCAGGGTTCGACCGATACTTCTCCAGCCGCACGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACCAACCGAGAGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LeuGln------AsnLysArgAsnHisArgGlnIleCysAspLysHisLeuAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATCGGGCAGGACTCGGCCTATGAGCAGGAGGGAAGGTGCAGTTCGTGATTGACGCTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |||
|Ile---AspSerSerAsnTyrGluGlnGluSerLysIleMetPheValValAsnAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TACGCCATGGGCCACGCGTGCACGCCATGCACCGTGACCTGTGTCCCGGGCCGCGTAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 879
236
85
195
35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-828-332-6 (1-1755) x JC7160 (1-879)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.6e-67
1155.50
58.26%
42.83%
34.98%
                                                                                                                                                                                                                                                                                                                                GGCAAC 1650
                                                                                                                                                                                                                                                                                                                                                                                 GlySer 850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores
Pred. No.:
                                                                                                                                                                                                                                                                          829
                                                789
                                                                                                                                                                                                                   1585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               398
1465
                                                                                                         1525
                                                                                                                                                             809
                                                                                                                                                                                                                                                                                                                                1645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     379
                                                                                                                                                                                                                                                                                                                                                                                   849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Si
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                       Š
                                                                                                                                                 요
                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
```

1014

555

774

714

575

834

595

615 954

894

1134

695

675

1194

1254

6	6868686868686
9y 1375 ATCGGCTTCACCATCTACACCACTCCCATTCTGGCTGGCT	F;735-756/Domain: transmembrane #status predicted <trv> F;705-756/Domain: transmembrane #status predicted <tvi>F;704-791/Domain: transmembrane #status predicted <tvi>F;704-791/Domain: transmembrane #status predicted <tvii>F;804-828/Domain: transmembrane #status predicted <tvii #status="" (1-1755)="" (1-879)="" (asn)="" (covalent)="" 1="" 1152.50="" 16="" 196="" 2.51e-67="" 236="" 34.89="" 58.08="" 75="" 84="" 879="" alignment="" best="" binding="" carbohydrate="" conservative:="" f;209,292,414,439="" guery="" jho562="" length:="" local="" match:="" matches:="" mismatches:="" percent="" predicted="" qy="" score:="" scores:="" similarity:="" site:="" tcatcttgccaacgaggatgacatcagggttcgaccgaacatccatgcagg="" td="" us-10-828-332-6="" x="" ="" <=""></tvii></tvii></tvi></tvi></trv>

384SerLeuThrLeuLysThrHisHisValGlnAspSerLysMetGlyPheVallle 401 247 GACGCTGTGTACGCCATGGGCCACGCGTGCACCGTGCACCGTGTGTCCCGGC 306 ::: ::: ::: :::	307 CGCGTAGGACTCTGCCCTGGAGGCCCCGTGGATGGCACCCAGCTGCTTAAGTACATC 366	367 AGGAACGTCAACTTCTCAGGCATTGCGGGAACCCTGTAACCTTCAATGAGAACGGAGAC 426	427 GCACCGGGGCGTACGACTACCAGTACCAACTGCGCAATGGCTCGGCCGAGTAC 483 :::	484 AAGGTCATCGGCTCGTGGACAGACCACCTGCACAATAGAGCGGATGCAGTGCCCA 543 :::	544 GGGAGTGGCCAGCTGCCGGCTCCATCTGCAGTCTGCCCTGCCCAGCCCGGGAGGA 603 :::	604 AAGAAGACTGTGAAGGGCATGGCTTGCTGGCACTGCGAGCCCTGCACCGGGTAC 660	661 CAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAG 720 :::	721 AACCGCACGAGCTGCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGGC 780 :::	781 GRGCTGCCCCTCTTCCTGGCCGTGGTGGGCATCGCCGCCACGCTGTTGTGGTGCTCGT 840 ::	841 TTTGTGCGCTACACGATACCCCCATCGTCAAGGCCTCGGCGGAACTGAGCTACGTG 900	901 CTGCTGGCGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGAC 960	961 CTGGGGACCTGTTCGCTCCGCATCTTCCTAGGCTCGGCATGAGCATCAGCTACGC 1020	1021 GCCCTGCTGACGAGACCAACGCATTTACCGCATCTTTGAGCAGGCAAACGGTCGGT	1081AGTGCCCGGGTTTCATCAGCCCGGCCTCGCAGCTGGCCATCACCTTCATCCTC 1134	1135 ATCTCCCTGCAGCTGCTGCGTGTGCTGGTGCTGGTGGACCCCTCCCACTCGGTG 1194	1195 GTGGACTTCCAGGACCAACGGACACTTGACCCCGCTTTGCCAGGGGGGTGCTCAAGTGC 1254	1255 GACATCTCGGACCTGTCCCTCATCTGCCTGGGCTACAGCATGCTGCTGATGGTCACG 1314 1::
අ රු අ	& a	& 8	& વ	& g	& &	දු දු	රු සි	6 6	ò a	& g	& A	ç d	& 8	ò a	S G	ò a	oy Oy
Db 731 AsnValLy8AspSerSerMetLeuIleSerLeuThrTyrAspValValLeuValIleLeu 750 Qy 1315 TGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCGGAGACCTTCAACGAGGCCAAGCC 1374 Db 751 CyeThrValTyrAlaPheLy8ThrArgLy8Cy8ProGluAsnPheAsnGluAlaLy8Phe 770	1375 ATCGGCTTCACCATGTACACCACCTGCATTGTCTGGCTGG	Oy 1435 GGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTGACGGTCTCCGTG 1494	Oy 1495 AGTCTGAGGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCATCCTC 1554	Oy 1555 TTCCACCCGGAGCAGCAGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCCCC 1614	Oy 1615 GCCACCATGTCCAACAAGTTCACACAGAGGC 1647	RESULT 9 JC2132 metabotropic glutamate receptor 5 A - human	C;Species: Homo sapiens (man) C;Species: Homo sapiens (man) C;Aacession: JC2132 R;Minakami, R;; Katsuki, F;; Yamamoto, T.; Nakamura, K.; Sugiyama, H.	Biochem. Biophys. Res. Commun. 199, 1136-1143, 1994 A;Title: Molecular cloning and the functional expression of two isoforms of human metabor A;Reference number: UC2131; MUID:94197696; PMID:7908515 A;Accession: UC2132	A; Molecule type: mRNA A; Residues: 1-1180 <min> C; Comment: This protein is coupled to guanine nucleotide binding proteins. C; Keywords: glycoprotein; neurotransmitter; receptor; transmembrane protein</min>	F;580-604/Domain: transmembrane #status predicted <tm1> F;617-637/Domain: transmembrane #status predicted <tm2> F;644-664/Domain: transmembrane #status predicted <tm3> F;694-714/Domain: transmembrane #status predicted <tm4></tm4></tm3></tm2></tm1>	F;738-759/Domain: transmembrane #status predicted <tm5> F;773-794/Domain: transmembrane #status predicted <tm6> F;803-827/Domain: transmembrane #status predicted <tm7></tm7></tm6></tm5>	nment Scores: 2.12e-65 . No.: 1123.00 snt Similarity: 58.88*	: 40.25% Mismatches: 34.00% Indels: 2 Gaps:	-10-828-332-6 (1-1755) x JC2132 (1-1180) 7 GGGGTATCATCATCATCAGGGATGACATCAGGGTTCGACCGATACTTCTCCAGC	5.4 GIVILEINKIIELYSELEGORDINSEIFIONBOVALLYSEIERNBANDYVIIYLUGUDYS 67 CGCACGCTGGACAACAACAGCGCAACATCTGGTTTGCCGAGTTCTGGAAGGACAACTTC 11:	127 CATTGCAAGTTGAGCGCCAGGGGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACCAAC	DD 364 GINCYBARGLeuGluGlyPneProcinGluAshSerLyBiyrAshLyBiyrAshLyBahanser 383 Qy 187 CGAGAGCGCATCGGGCAGGCCTATGAGCAGGGGAAGGGGCAAGTTCGTGATT 246 ::: ::: :::

```
1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGGGGACCTGTTCGCTCCGCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCG 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATCTCCCTGCAGCTGCTCGGCATCTGCGTGGTTCGTGGTGGACCCCTCCCACTCGGTG 1194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1254
                                   306
                                                                        366
                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                             421
                                                                                          441
                                                                                                            426
                                                                                                                                                                                                      500
                                                                                                                                                                                                                         603
                                                                                                                                                                                                                                           520
                                                                                                                                                                                                                                                                                                                                     780
                                                                                                                                                                                                                                                                                                                                                        580
                                                                                                                                                                                                                                                                                                                                                                         840
                                                                                                                                                                                                                                                                                                                                                                                                              900
                                                                                                                                                                                                                                                                                                                                                                                                                        CTGCTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGAC 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                700
                 401
                                                                                                                             461
                                                                                                                                                GCACCGGGGCGCTACGACATCTACCAGTAC---CAACTGCGCAATGGCTCGGCCGAGTAC 483
                                                                                                                                                                 481
                                                                                                                                                                                    543
                                                                                                                                                                                                                                                                                                                                                                                   ...----ProSerIleArgGluValTyrLeuIleCys 733
                                                                                   TyralaglyLeuCysAspAlaMetLysProlleAspGlyArgLysLeuLeuGluSerLeu
                                                                                                                                                                                                                                  SerLysLysSerAsnIleIleArgSerValCysSerGluProCysGluLysGlyGlnIle
                                                                                                                                                                                                                                                                                                                                                CGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGCACCCAGCTGCTTAAGTACATC
                                                                                                                      AAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGGCCCA
                                                                                                                                                                                                :::||||||||| |||:::
IleAsnValGlySerTrp---AspAsnGlyGluLeuLysMetAspAspAspGluValTrp
                                                                                                                                                                                                                         AAGAAGACTGTGAAGGGC---ATGGCTTGCTGCTGGCACTGCGAGCCCTGCACCGGGTAC
                                                                                                                                                                                                                                                                       CAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAG
                                                                                                                                                                                                                                                                                                                                      <u> AACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGGCC</u>
                                                                                                                                                                                                                                                                                                                                                                          Grecheccecterrecredeceregecardeccecececacecretregregrege
                                                                                                                                                                                                                                                                                                                                                                                                               TTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ::: ::: |||||||||||||||----SerLeuThrLeuLysThrHisHisYalGlnAspSerLysMetGlyPheValIle
                                              AGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAACCTTCAATGAGAACGGAGAC
                                                                                                                                                        GACGCTGTGTACGCCATGGGCCACGCGCTGCACGCCATGCACCTGTGTCCCCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gln1leTyrCysTyrLeuGlnArgIleGly1leGlyLeuSerProAlaMetSerTyrSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCAGGGGGAAGGTGCAGTTCGTGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----AGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATCACCTTCATCTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    lleCyslleGlnLeuGlyIleIleValAlaLeuPheIleMetGluProProAspIleMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTGGACTTCCAGGACCAACGGACACTTGACCCCCCCCTTTGCCAGGGGCGTGCTCAAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          721 HisAspTyr------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             661
                                                                                                                                                                                    484
                                                                                                                                                                                                                          544
                                                                                                                                                                                                                                                                                                                                                        561
                                                                                                                                                                                                                                                                                                                                                                                             581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1195
                                                      402
                                                                        307
                                                                                                            367
                                                                                                                              442
                                                                                                                                                 427
                                                                                                                                                                 462
                                                                                                                                                                                                       482
                                                                                                                                                                                                                                           501
                                                                                                                                                                                                                                                              604
                                                                                                                                                                                                                                                                                521
                                                                                                                                                                                                                                                                                                   661
                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                601
                                                                                                                                                                                                                                                                                                                                                                                                                                                   901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          641
                 384
187
                                                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                                                          781
                                                                                                                                                                                                                                                                                                                                                                                                               841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     701
8 6 8 6
                                                                   8 8
                                                                                                     δ
                                                                                                                         g
                                                                                                                                               ò
                                                                                                                                                             8 8
                                                                                                                                                                                                  8 8
                                                                                                                                                                                                                                      중 음
                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                          8 &
                                                                                                                                                                                                                                                                                                                               8 &
                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                         8 8 8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  원
장
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                       human metabo
                                                                                                                                                                                                                                                                           1434
                                                                        1494
                                                                                                                                                                                    GCCACCATGTCCAACAAGAGTTCACACAGAAGGGCAACTTCAGGCCCAATGGGGAAGCCAAA 1674
                                                                                                           AGTCTGAGCGCTTCAGTGTCCTGGGGATGCTCTACATGCCCAAAGTCTACATCATCCTC 1554
                                                                                                                                                TTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCC 1614
                                                      793
                                                                                          908
                                                                                                                             826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTGACGGTCTCCGTG
                                                                                   :::|||:::
SerThrValValArgMetHisValGlyAspGlyLys-SerSerSerAlaAlaSerArgSe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGGTATCATCATCTTTGCCAACGAGGATGACATCAGGGTTCGACCGATACTTCTCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGCACGCTGGACAACAACAGGCGCAACATCTGGTTTTGCCGAGTTCTGGGAGGACAACTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATTGCAAGTTGAAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   364 GlnCysArgLeuGluGlyPheProGlnGluAsnSerLysTyrAsnLysThrCysAsnSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1212
229
106
205
29
8
TGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                        TCAGAGCTGTGAGAACCTGGAGA 1699
                                                                                                                                                                                                                                            867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-828-332-6 (1-1755) x JC2131 (1-1212)
                                                                                                                                                                                                                                           rSerSerLeuValAsnLeuTrpLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2.13e-65
1123.00
58.88%
40.25%
34.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
Pred. No.:
                 754
1315
                                   1375
                                                                       1435
                                                                                                            1495
                                                                                                                                                1555
                                                                                                                                                                                   1615
                                                                                                                                                                                                                         1675
                                                                                         794
                                                                                                                             807
                                                                                                                                                                  827
                                                                                                                                                                                                      840
                                                                                                                                                                                                                                            859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 127
ઠે
               g
                                ઠે
                                                g
                                                                     ò
                                                                                    엄
                                                                                                         Š
                                                                                                                         g
                                                                                                                                               δ
                                                                                                                                                             ď
                                                                                                                                                                                   8
                                                                                                                                                                                                      음
                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
```

67 CGCAGCTGGACAACACAGCACAACATTGCGGAGTTCTGGGAGGACAACTTC 15 1 LeuargleauAspThrAsmThrAsgAsnPrOTTpPheProGluPheTrpGlnHisArgPhe 376 127 CATTGCAAGTTGAGCCGCACCCCCCAACAAGCACGCCAACAGCAGCGCCAAC 186 128 CGAGAGCGCATCGAGCACCCCCCCAACAAGCAGCACACTTCGTGATT 246 189 AsnGluSerLengtudianAsnTyralGlnAspSerLysMetGlyPheVall11 e 414 247 GACGCTGAGCACCTGCGCCCTATCGACAGGAGCGCAACTTCGTGATT 246 15 AsnGluSerLengtudianAsnTyralGlnAspSerLysMetGlyPheVall1 e 414 247 GACGCTGAGCACCTGCGCCTATCGACCAGCAGCGCAACTTCGTGATT 246 15 AsnAlalafyThrAshAshCAlals of 1 plant 1	613 IlePheValLeuTyrArgAspThrProValValLysSerSerSerSerGluLeuCysTyr 612 898 GTGCTGCTGGCGGCACTTCTGTGCTACCTTCCTCATGATCGCAGAGCG 957 812 11e11eLeuAlaGly
6 B 6 B 6 B 6 B 6 B 6 B 6 B 6 B 6 B 6 B	8 6 8 6 8 6 8 6 8
Oy 1255 GACATCTCCGACCTCTCCTCCTCTCTCTCTCTCTCTCTCT	A; Gratus: preliminary A; Molecule type: mRNA A; Molecule type: mRNA A; Residues: 1-1199 < km. A; A; Cross-references: EMBL.X57569; NID:g56646; PIDN:CAA40799.1; PID:g56647 C; Keywords: G protein-coupled receptor; transmembrane protein Alignment Scores: Alignment Scores: Alignment Scores: Alignment Scores: 1122.00 Matches: 239 Percent Similarity: 56.10* Mismatches: 208 Best Local Similarity: 33.97* Indels: 62 Gaps: 12 Gaps: 12 US-10-828-332-6 (1-1755) x A41939 (1-1199) Qy 7 GGGGTATCATCATCGCCAACGAGGATGACATCGACCGATACTTCCCAGC 66 Db 337 GlylleThrIleLysLeuGluValArgSerPhcAspAspTyrPhcLeuLys 356

DB: 2 Gaps: 8 US-10-828-332-6 (1-1755) x A42916 (1-1171)	Qy 7 GGGGTATCATCATCTTTGCCAACGAGGATGACATCAGGGTTCGACGATACTTCTCCAGC 66	Oy 67 CGCACGCTGGACAACAACAGCGCAACATCTGGTTTGCCGAGTTCTGGGAGGACGAACTTC 126 :::	Qy 127 CATTGCAAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACCAAC 186	Oy 187 CGAGAGCGCATCGGCCAGGACTCGGCCTATGAGCAGGGGGAAGGTGCAGTTCGTGATT 246 ::: :: ::	Oy 247 GACGCTGTGTACGCCATGGCCACGCGCGCCCATGCACCGTGACCTGTGTCCCGGC 306 ::: ::: ::: :::	Qy 307 CGCGTAGGACTCTGCCCTGGCATGGACCCCGTGGATGGCACCCAGCTGCTTAAGTACATC 366	Qy 367 AGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAACCTTCAATGAGAACGGAGAC 426	Qy 427 GCACCGGGGCTACGACATCTACCAGTACCAACTGCGCAATGGCTCGGCCGAGTAC 483 :::	Qy 484 AAGGTCATCGGCTCGTGGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGGCCA 543 :::	Qy 544 GGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGCTGGCCCGGGGAGCGA 603 :::	604 AAGAAGACTGTGAAGGCATGGCTTGCTGCACGCACTGCGAGCCCTGCACCCGGGTAC 66	0y 661 CAGTACCAAGTGGACCGCTAAGACCTGCCCCTACGACATGCGGCCCACAGAG 720
Oy 1132 CTCATCTCCCTGCAGCTGGTCTGCGTGGTGGTGGTGGTGGTCGTCGCTCG 1191	Qy 1192 GTGGTGGACTTCCAGGACCACGGACACTTGACCCGGCTTTGCCAGGGGGTGCTCAAG 1251	Qy 1252 TGCGACATCTCGGACCTGTCCCTCTGCTGGGCTACAGCATGCTGATGGTC 1311	Qy 1312 ACGTGTACTGTGTGTGTCCCAGGCCTGCCCGAGGCCTTCAACGAGGCCAAG 1371	Qy 1372 CCCATCGGCTTCACCATGTACACCACCTGCATTGTCTGGCTGG	Qy 1432 TITGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTGACGGTCTCC 1491	Qy 1492 GTGAGTCTGAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATC 1551	Qy 1552 CTCTTCCACCCCGGAGCAGAGCGCCCAAGCGCAGCAGCAGCAGCTCTC	Qy 1597	Qy 1630 AAGTTCACACAGAAGGGCAACTTCAGGCCCAATGGGGAAGCCAAATCA 1677	Oy 1678GAGCTGTGT 1686 Db 895 TrnSerGluProGlvGlvArqGlnAlaProLvsGlvGlnHisValTrnGlnArqLeuSer 914	1687 GAGAACCTGGAGACCCCAGCGCTACCAAACAGACCTACGTC 1731	RESULT 12 A4296 metabotropic glutamate receptor mGluBS - rat C;Species: Rattus norvegicus (Norway rat) C;Species: Rattus norvegicus (Norway rat) C;Species: Rattus norvegicus (Norway rat) C;Species: A4216 R;Abe, T.; Sugihara, H.; Nawa, H.; Shigemoto, R.; Mizuno, N.; Nakanishi, S. J. Biol. Chem. 267, 13361-13368, 1992 A;Title: Molecular characterization of a novel metabotropic glutamate receptor mGluBS of A;Reference number: A42916, MUID:92317054; PMID:1320017 A;Recession: A4296 A;Reterence number: A42916 A;Residues: Dreliminary A;Molecule type: mRNA A;Residues: 1-1171 cABB> A;Cross-references: UNIPROT:P31424; GB:D10891; 'NID:g220813; PIDN:BAA01711.1; PID:d100218 A;Residues: 1-1171 cABB> A;Cross-references: UNIPROT:P31424; GB:D10891; 'NID:g220813; PIDN:BAA01711.1; PID:d100218 A;Residues: 1-1171 cABB> A;Residues: 1-1171 cABB> A;Cross-references: UNIPROT:P31424; GB:D10891; 'NID:g220813; PIDN:BAA01711.1; PID:d100218 A;Roces sequence extracted from NCBI backbone (NCBIN:107749, NCBIP:107750) C;Keywords: G protein-coupled receptor; transmembrane protein Alignment Scores: C;Keywords: G protein-coupled receptor; transmembrane protein Alignment Scores: Conservative: 105 Best Local Similarity: A 0.42* Mismatches: D 09-Jul-2004 A;Redessidues: A124 A133.64 A;Redessidues: A124 A1540-1171 A16418: A171 A171 A171 A171 A171 A171 A171 A171

406 246 424 306 444

366 126

99

366

464

426

483 504 543 523 603 543

484

780

840 623 643

```
phosphate (Ser) (covalent) (by cAMP-dependent kinase) #status predic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGCTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGAC 960
                                                                                                                                                                                                                             |||::::::
|GlyIleThrValLysLeuHisSerGluGluValThrSerPheAspAspTyrPheLeuLys
                                                                                                                                                                                                                                                                                                                                                                 ::: ||| :::|||||| GlulleValGlnAspGluPheThrCysThrAlaCysAspLeuGlyTrpTrpProAspPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                 CGCGTAGGACTCTGCCTCGCATGGACCCCGTGGATGGCACCCCAGCTGATTAAGTACATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |||||||||||||:::|||
ThrProGlyArgTyrGluIleMetAsnLeuGlnTyrValGluProGlyAlaPheAspTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IleAsnValGlySerTrpHisGluGly---GlnLeuSerIleAspAspTyrMetGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AACCGCACGAGCTGCCCATCCCCATCGTCGAGTTGGAGTGGGACTCGCCGTGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGCTGCCCCTCTTCCTGGCCGTGGGCATCGCCGCCACGCTGTTCGTGGTGGTCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGGTATCATCATCTTTGCCAACGAGGATGACATCAGGGTTCGACCGATACTTCTCCAGC
                                                                                                                                                                                                                                                                            CGCACGCTGGACAACAACAACAACATCTGGTTTGCCGAGTTCTGGGAGGACAACTTC
                                                                                                                                                                                                                                                                                                                                                                                                           CGAGAGCGCATCGGCCAGGACTCGGCCTATGAGCAGGAGGGGGAAGGTGCAGTTCGTGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACGCTGTGTACGCCATGGGCCACGCGTGCACGCCATGCACCGTGACCTGTGTCCCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAACCTTCAATGAGAACGGAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCACCGGGGCGCTACGACATCTACCAGTACCAA---CTGCGCAATGGCTCGGCCGAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGGTCATCGGCTCGTGGACAGACCCACCTGCACCTCAGAATAGAGCGGATGCAGTGGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCTGCCCTGCCAGCCCGGGGAGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGAAGACTGTGAAGGGC----ATGGCTTGCTGCTGGCACTGCGAGCCCTGCACCGGGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTTGTGCGCTACAACGATACCCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTG
                                                 1218
220
97
189
21
                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                        (1-1218)
                                                                                                                                                                      x S71376
                                              7.61e-65
1114.50
60.15$
41.75$
                                                                                                                                                                        (1-1755)
                                                                                     Percent Similarity:
Best Local Similarity:
   7,892/Binding site:
                                   Alignment Scores:
Pred. No.:
                                                                                                                                                                        US-10-828-332-6
                                                                                                                                                                                                                                                                          67
                                                                                                                                                                                                                                                                                                             367
                                                                                                                                                                                                                                                                                                                                                                             387
                                                                                                                                                                                                                                                                                                                                                                                                               187
                                                                                                                                                                                                                                                                                                                                                                                                                                                 407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721
                                                                                                                      Query Match
                                                     ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8 è
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          상 점
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     名
                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                        6 ይ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              원 장
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 13
S71376
glutamer receptor homolog - cherry salmon
C;Species: Oncorhynchus masou (cherry salmon)
C;Species: Oncorhynchus masou (cherry salmon)
C;Species: 0.71376
C;Date: 11-Mar-1998 #sequence_revision 17-Apr-1998 #text_change 09-Jul-2004
C;Date: 11-Mar-1998 #sequence_revision 17-Apr-1998 #text_change 09-Jul-2004
C;Date: 11-Mar-1998 #sequence_revision 17-Apr-1998 #text_change 09-Jul-2004
C;Date: 12-198 #tequence_revision of a bifunctional metabotropic receptor activated
A;Title: Cloning and characterization of a bifunctional metabotropic receptor activated
A;Title: Cloning and characterization of a bifunctional metabotropic receptor activated
A;Title: Cloning and characterization of a bifunctional metabotropic receptor activated
A;Reference number: S71376; MUID:96354880; PMID:8763318
A;Residues: 1-1218 «KUB»
A;Residues: 1-1218 »
A;Residues: 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1674
                                                                                                                                                                                                                                                            1314
                                                                                                                                                                                                                                                                                                                                                                                               1434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           828
AGTCTGAGGGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCATCCTC
                                                                        ATCTCCCTGCAGCTGCTCGCCATCTGCGTGTGCTTCGTGGTGGACCCCTCCCACTCGGTG
                                                                                                                                            |||| :::|||||||
|IeCys1leGlnLeuGlyIleIleValAlaLeuPheIleMetGluProProAspIleMet
                                                                                                                                                                                          GTGGACTTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGGCGTGCTCAAGTGC
                                                                                                                                                                                                                          GACATCTCGGACCTGTCCTCATCTGCCTGCTGGCTACAGCATGCTGCTGATGGTCACG
                                                                                                                                                                                                                                                                                                                               TGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCC
                                                                                                                                                                                                                                                                                                                                                                                                 GGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTGACGGTCTCCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GlySerAsn--------------TyrLysIleIleThrMetCysPheSerVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SerLeuSerAlaThrValAlaLeuGlyCysMetPheValProLysValTyrIleIleLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AlaLysProGluArgAsnVal-------ArgSerAlaPheThrThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCCACCATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAATGGGGAAGCCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAGAGCTGTGAGAACCTGGAGA 1699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1555
                                                     1081
                                                                                      680
                                                                                                                                                        700
                                                                                                                                                                                          1195
                                                                                                                                                                                                                            720
                                                                                                                                                                                                                                                             1255
                                                                                                                                                                                                                                                                                             733
                                                                                                                                                                                                                                                                                                                               1315
                                                                                                                                                                                                                                                                                                                                                                 753
                                                                                                                                                                                                                                                                                                                                                                                               1375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             828
                                                                                 유
                                                                                                                                             g
                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                        8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                        중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ሯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ద
                                                     ò
                                                                                                          ò
                                                                                                                                                                               ò
```

Query Match: 29.96% Indels: 85 DB: 2 Gaps: 17	US-10-828-332-6 (1-1755) x T27628 (1-999) Qy 22 TTGCCAACGAGGATGACATCAGGGTTGGACGATACTTCTCAGGCGCACGCTG 75	Db 389 LeualaSerGlnLygValProSerPheGluGluTyrPheMetSerLeuHisProGlyThr 408 Oy 76 GACAACAACAGGGGAACATCTGGTTTGCCGAGTTCTGGGAGGACAACTTCCATTGCAAG 135	b 409 GluAlaPheGluArgAsnLysTrpLeuArgGluLeuTrpGlnValLysTyrLysCysGlu 428 0. 136 mmcancyconnancaanaanaanaanaanaanaanaanaanaanaanaa	429 PheAspThrProProflySerThrAlaSerArgCysGluAsp	Qy 196 ATCGGGCAGGACTCGGCCTATGAGCAGGAGGGAGGAGGTGCAGTTTGACGCT 252	253 GTGTATGGGCACGCTGCACGCATGCACGTGACCTGTGTCCCGGC	463 ValtyrAlaileAlaHisGlyLeuGlnSerMetLysGlnAlaileCysProAspAspAla	Qy 307	GCACCCAGCTGCTTAAGTACATCAGGAACGTC	Db 503 AsnileAspGlySerAspPheTyrGlnAsnTyrLeuLeuLysValAsnPheThrGlyLys 522 Qy 388ATTGGGGGAACCCT 402		403 GIAACCITCAAIGAGAACGGAGACGCAGGGGGGGTACGACTACCAGIACGACTACCAGTACCAACTG	Db 543 PheArgPheSerProGlnGlyAspGlyProAlaSerTyrThr1leLeuThrTyrLysBro 562	563 LyaSerMetAspLysLysArgArgMetThrAspAspGluSerSerProSerAspTyrVal	Qy 487 GTCATCGGCTCGTGGACAGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGCCAGGG 546	Db 583 GluileGlyHisTrpSerGluAsnLeuThrIleTyrGluLysAsnLeuTrpTrp 601	Oy 547 AGTGGCCAGCAGCTGCCATCTGCAGTCTGCCAGCCCAGC	Qy 607 AAGACTGTGAAGGCATGCTGCTGCTGCAGCGCAGCCCTGCACCGGGTACCAGGTAC 666 ::: :::	Gy 667 CAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAGAACCGC 726	Db 642 LeuileAsnGluThrHisCysValGlyCysGluGlnGlyTrpTrpProThrLysAspArg 661	727 ACGAGCIGCCAGCCCATCCTCAACTTGGAGTGGGACTCGCCGTGG	662 LyeGlyCyePheAspLeuSerLeuSerGlnLeuLysTyrMetArgTrpArgSerMetTyr	Oy 778 GCCGTGCTCCTTCTTGGCCGTGGTGGGCATGCCGCCACGCTGTTGGTGGTG 837 ::::::::::	838 ACGITTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTAC	:::
	Oy 961 CTGGGGACCTGTTCGCTCCGCGCATCTTCCTAGGGCTCGGCATGAGCTACGG 1020 ::: :: :: :: Db 664 ValAlaSerCysTyrLeuGlnArgLeuLeuValGlyLeuSerAlaThrMetCysTyrSer 683	Qy 1021 GCCTGCTGACGAGACCAACGCATTTACCGCATCTTTGAGCAGGGAACGGTCGGT	Oy 1081 AGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATCACCTTCATCCTC 1134 Dh 704 CvgThrard(vgProbrobader Sorallattranlaction) 1:::	1135 ATCTCCCTGCAGCTCCTCGGCATCTGCGTGCGTCGTCGTGGTGGTCGTCCTCCCACTCCCACTCGGTG	Db 724 ValšerValGinLeuThrLeuGluValThrLeuIleIleLeuGluProProMetProVal 743 Qy 1195 GTGGACTTCCAGGACCAACGGACACTTGACCCCGCTTTGCCAGGGGCGTGCTCAAGTGC 1254		1255 GACATCTCGGACCTGTCCCTCATCTGCCTGCTGGCTGGCT	ProbeuGLyTyrAenGL GGCGTGCCCGAGACCTT	Db 777 CysThrTyrTyrAlaPheLysThrArgAsnValProAlaAsnPheAsnGluAlaLysTyr 796	OY 1375 ATCGGCTTCACCACGACCTGCATTGTCTGGCTGGCCTTCATCCCCATCTTTTTT 1434	QY 1435 GGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTGACGGTCTCCGTG 1494	817 GlyserAsnTyriysileileThrThrSerPheSerVal	OY 1495 AGICTGAGCGTICAGTGTCCTGGGGAIGCTCIACATGCCCAAAGTCTACATCATCCTC 1554 ::	1555 TTCCACCCGGAGCAGAACTT 1575	Db 850 AlaLygProGluArgAgnVal 856	RESULT 14	1270chetical protein ZCS06.4 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Pate: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 09-Jul-2004 C;Accession: TZ7628	R;Harris, B. submitted to the EMBL Data Library, December 1994 A;Reference number: 220395	A;Accession: T27628 A;Etatus: preliminary; translated from GB/EMBL/DDBJ	A;Nolecule Cype: DNA A;Residues: 1-999 «WIL» A;Crose-references: UNIPROT:009630: EMBL:Z47073: PIDN:CAA87374.1: GSPDB:GN00028: CBSP:ZC	,0200		A;Introns: 32/2; 65/3; 77/3; 113/2; 140/3; 177/2; 240/2; 277/1; 315/2; 439/2; 471/3; 591 C;Superfamily: metabotropic glutamate receptor 4	Length:	989.50 Milarity: 52.33% C

```
Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                     43
                                                                                                                                                                                                                                                                                        328
                                                                                                                                                                                                                                                                                                                                                     091
                                                                                                                                                                                                                                                                                                                                                                                              220
                                                                                                                                                                                                                                                                                                                                                                                                                                     280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           523
                                                                                                                                                                                    Score:
                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                       1017
                                                                                1077
                                                                                                                                                                                                                                                                                         1377
                                                                                                                                                                                                                                                                                                                                 1437
                                                                                                                                                                                                                                                                                                                                                                          1497
                                                                                                                                                                                                                                                                                                                                                                                                                   1557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1677
                                                                                                                        GTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATCACCTTCATCCTCATC 1137
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1558 CACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCC 1617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1678 GAGCTGTGTGAGAAC---CTGGAGACCCCA-------GCGCTGGCTGCCAAACAG 1722
                                                                                                                                                                                                                                                                                                                                                                                              606
                                                            761
                                                                                                                                                                                    814
                                                                                                                                                                                                                                                                                                            872
                                                                                                                                                                                                                                                                                                                                                                                                                                     929
957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 15
T21340
hypothetical protein F45H11.4 - Caenorhabditis elegans
hypothetical protein F45H11.4 - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Species: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 09-Jul-2004
C;Accession: T21340; T22252
R;McMurray, A.
R;McMurray, A.
R;Reference number: 219409
A;Reference number: 219409
A;Reference number: 219409
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Residues: L1267 <WILb>
            :::||||||||
122 IleLeuLeulleSerMetIleMetCysTyrCysMetThrPheValLeuLeuSerLysPro
                                                                                                                                   ----ProGlyTrpArgHisHisTyrProThrArgAspGlnValValLeuThrCysAsn
                                                                                                                                                                                                                                                            GTGCTGCTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCG
                                       958 GACCTGGGGACCTGTTCGCTCCGCCGATCTTCCTAGGGCTCGGCATGAGCATCAGCTAC
                                                   1018 GCGGCCCTGCTGACCAAGACCAACTTTACCGCATCTTTGAGCAGGGCAAACGGTCG
                                                                                           1138 TCCCTGCAGCTGCTCGCCATCTGCTGGTTCGTGGTGGACCCCTCCCACTCGGTGGTG
                                                                                                                                                                           GlyValGlnLeulleGlySerLeulleTrpLeuSerValValPro---------
                                                                                                                                                                                                        1198 GACTTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGGCGTGCTCAAGTGCGAC
                                                                                                                                                                                                                                                ATCTCGGACCTGTCCCTCATCTGCCTGCTGGCTACAGCATGCTGCTGATGGTCACGTGT
                                                                                                                                                                                                                                                                                         ACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATC
                                                                                                                                                                                                                                                                                                                                  GGCTTCACCATGTACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCATCTTTTTGGC
                                                                                                                                                                                                                                                                                                                                                                          ACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACAGTGACGGTCTCCGTGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                   1498 CTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCATCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                             1618 ACCATGTCCAACAAGTTCACACAGAAGGCCAACTTCAGGCCCCAATGGGGAAGCCAAATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACC 1725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Thr 977
                                                                                                                        1078
                                                                                                                                            780
                                                                                                                                                                                     800
                                                                                                                                                                                                                                                 1258
                                                                                                                                                                                                                                                                                                                                  1378
                                                                                                                                                                                                                                                                                                                                                                          1438
868
                                                            742
                                                                                                                                                                                                                              815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        716
                                                                                                                                                                                                                                                                                                                                               음 상 음
                                                                                                                                                                                                                                                                                                                                                                                                               8 8 8
                 임
                                       8 8 8
                                                                                              යි දි
                                                                                                                                     g &
                                                                                                                                                                                8 & 8
                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                8 & 8
                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
```

```
A;Cross-references: UNIPROT:Q93564; EMBL:Z78418; PIDN:CAB01699.1; GSPDB:GN00019; CESP:F4
A;Experimental source: clone F25D7
Bubmitted to the EMBL Data Library, August 1996
A;Reference number: Z19537
A;Accession: T22252
A;Accession: T2252
A;Accession: T22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Nap position: 1
A;Introns: 38/3; 90/2; 149/3; 207/1; 356/2; 413/2; 458/2; 520/3; 691/3; 777/2; 796/2; 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             103 GCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGC---CGCCACGCGCTCAAGAAG 159
|||||||||||::
348 ArgGluPheTrpGlnGlnLy8PheAsnCysGlnPheAlaValSerLy8GluAspLy8A8n 367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAIGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAAC 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCATGCACCGTGACCTGTGCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTG 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ||||||::::::||| ||| |||
406 AlaMetTyrGlnAspArgCysArgAspAsnSerThrLeuCysThrGluWetLeuSerArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         :::|||||| ||| :::|||||:
126 AsnGlyThrLeuLeuTyrGluTyrLeuLeuAsnValThrTyrSerAspGlnPheLysGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         :::||| :::||| IlaAsnAspTyrG]yValG]uGluLeuAspMetThrAlaLysSerMetPhePheAspLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ::: |||||| |||:::|||||| ThrglubeuLeuProGluSerValCy8SerArgProCy8Gly1leGlyGlnArgGlnArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGGAGGGAAGGTGCAGTTCGTGATTGACGCTGTACGCCATGGGCCACGCGCTGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       400 CCTGTAACCTTCAATGAGAACGGAGACGCACCGGGGGCGCTACGACATCTACCAGTAC---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    446 ProvalTyrPheAspArgAsnGlyAspProProAlaTrpTyrAspIleLeuAsnTyrIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ------CAACTGCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ||| |||||:::
||I|||||||:::
| GlyThrLysAspLeuAspAsn------ProTyrAsnGluValGlySerPheLysSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTGGACCGCTACACC ----TGTAAGACCTGCCCCTACGACATGCGGCCCACAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAGGCGCAACACATCTGGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGAAGCCACATCAAGAAGTGCACCAACCGAGGCGCATCGGGCAGGACTCGGCCTATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CACCTGCACCTCAGAATAGAGCGGATGCAGTGGCCAGGGAGTGGC----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1267
193
100
196
13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-828-332-6 (1-1755) x T21340 (1-1267)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5.07e-49
871.50
53.66%
35.35%
26.39%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
Query Match:
DB:
```

```
964 GGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCGGCC 1023
                                                                                                                                                                                                                                                                                                                                                      1138 TCCCTGCAGCTGGGCATCTGCGTGTGGTTGGAC---CCCTCCCACTCGGTG 1194
:::::||| ::: :: |||
700 AlaValGInCysValIleValGlyValGlyLeuMetArgAspTrpProAspAlaThrTyr 719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1375 ATCGGCTTCACCATG----- 1389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1390 ------TACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCATCTTTTTGGC 1437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1315 TGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCC 1374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1438 ACCICACAGICAGCCGACAAGCIGIACAICCAGACAACCACACIGACGGICICCGIGAGI 1497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1498 CTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCATCTTC 1557
                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACATCTCGGACCTGTCCCTCATCTGCCTGCTGGGCTACAGCATGCTGCTGATGGTCACG 1314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     812
                                                                   :::||| :::||| ||:::||| 640 ThrSerCysPheIleThrArgVallleProProIleAlaPheAlaValValTyrSerAla 659
                                                                                                                                                                                                                                                                                                                                                                                                                       |||||| |||::: |||
560 ArgThrGlyCysGluTyrIleIleProGluValValSerTrpThrSerPheGlyHisIle 579
                                                                                                                 CTGCCCCTCTTCCTGGCCGTGGTGGCCATCGCCACGCTGTTCGTGGTGGTCACGTTT 843
                                                                                                    844 GTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTGCTG 903
                                                                                                                                                    CTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGACCTG 963
                                                                                                                                                                    CGCACGAGCTGCCAGCCCATCCCCATGGTGGAGTGGGACTCGCCGTGGGCCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            793 IleIlePheGlnTyrCysThrValValValTrpIleAlaPheLeuValLeuHisMetGly
                                                                                                                                                                                                                                                                                                                                                                                                       1195 GTGGACTTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGGCGTGCTCAAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CACCCGGAGCAGACGTG 1575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               904
                                                  784
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1558
                                                                      g
                        셤
                                                  ઠે
                                                                                                 ઠે
                                                                                                                     a
                                                                                                                                                                         a
                                                                                                                                                 δ
                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                          ద
                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                        쉽
                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
```

Search completed: June 17, 2005, 18:53:32 Job time : 125 8ec8 This Page Blank (uspto)

Run

```
Sequence 13, Application US/09820809
Patent No. 6608176
GENERAL INFORMATION:
PAPLICANT: CHAUDHARI, NIRUPA
APPLICANT: CHAUDHARI, NIRUPA
APPLICANT: CHAUDHARI, STEPHEN D.
TITLE OF INVENTION: TTASTE RECEPTOR FOR UMAMI (MONOSODIUM GLUTAMATE) TASTE
FILE REFERENCE: 70373/27576
CURRENT APPLICATION NUMBER: US/09/820,809
CURRENT PILING DATE: 2001-03-30
PRIOR APPLICATION NUMBER: 60/193,454
PRIOR FILING DATE: 2000-03-31
NUMBER OF SEQ ID NOS: 14
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                64 AGCCGCACGCTGGACAACAACAGCGCCAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC 123
                                                                                                                                       Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGGTATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC
                                                                 Sequence 4, Al
Sequence 14, 1
Sequence 14, 1
Sequence 2, Al
                                                                                                                                                             νουνούνου απουρούνου απουρούνο απουρούνου απουρούν απουρ
              Sequence
                                                                                                                                       Sequence Sequence S
                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                 Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                     sednence sed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           604
2
2
5
5
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
                                    US-08-617-785-4
US-09-817-785-4
US-09-817-464-1
US-09-817-464-1
US-09-817-464-1
US-09-127-858-2
US-09-127-858-2
US-09-127-858-2
US-08-137-797A-2
US-08-137-797A-2
US-08-07-574-6
US-08-07-574-6
US-08-07-574-6
US-08-08-15-66-1
US-08-08-15-66-1
US-08-66-148-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-828-332-6 (1-1755) x US-09-820-809-13 (1-604)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-826-509-347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.48e-239
3050.50
98.97%
98.63%
92.36%
                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                     334.00
344.00
344.00
34.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; TYPE: PRT
; ORGANISM: Rattus
US-09-820-809-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-820-809-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 604
                                      2191.5
2191.5
2191.5
2054
2054
20654
11861.5
1172.5
1172.5
1178.5
1148.5
1148.5
1148.5
1148.5
1148.5
1148.5
1148.5
1173.1
1124
1123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ..
No.:
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Command line parameters:
-MODEL=frame+ n2p.model -DEV=xlp
-Q=/cgn2 1/USFV oppool pyl010828332/runat 17062005 171337 24975/app_query.fasta_1.1927
-Q=/cgn2 1/USFV oppool pyl010828332/runat 17062005 171337 24975/app_query.fasta_1.1927
-DB=188ued_Patents AA -QFMT=fasta n-SUFFIX=rai -MINMATCH=0.1 -LOOPCI=0
-LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=humar40.cdi
-LIST=45 -DOCALIGN=200 -THR SCORE=pct -THR MAX=100 -THR MIN=0 -AAXLEN=200000000
-USER=USI0828332 @CGN 1 1 49 @runat 17062005 171337 24975 -NCPU=6 -ICPU=3
-NO MMAP -LARGEQUERY -NEG SCORES=0 -WAIT -DSFBLOCK=100 -LONGLOG
-DEV TIMEOUT=120 -WARN TIMEOUT=30 -THRANS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 13, Appl
Sequence 19, Appl
Sequence 2, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 12, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 2, Appli
                                                                                                                                                        June 17, 2005, 18:28:23; Search time 54 Seconds (without alignments) 4852.189 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                     atgccaggggtatcatc......acaccaaccatgccatctag 1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     led Patents_AA:*
/cgn2_6/ptcdata/1/iaa/5A_COMB.pep:*
/cgn2_6/ptcdata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptcdata/1/iaa/6A_COMB.pep:*
/cgn2_6/ptcdata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptcdata/1/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptcdata/1/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptcdata/1/iaa/PCTUS_COMB.pep:*
              version 5.1.6
- 2005 Compugen Ltd.
                                                                                                               protein search, using frame_plus_n2p model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-820-809-13
PCT-US51-09422-19
US-08-617-785-2
US-09-641-318-2
US-09-817-464-2
US-08-853-116-2
US-08-604-298-1
US-08-604-298-1
US-08-617-785-12
US-08-617-464-12
US-08-617-464-12
US-08-453-862-2
US-08-453-734A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           513545 segs, 74649064 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                  Xgapop 10.0 , Xgapext
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                   GenCore
Copyright (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     seq length: 0
seq length: 200000000
                                                                                                                                                                                                                                             US-10-828-332-6
3303
1 atgccagaatates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                 BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         922.4
922.4
921.0
911.0
71.8
770.5
67.2
66.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3050.5
3050.5
3004.5
3004.5
3004.5
2328
2328
2328
2219
2210
2210
                                                                                                                                                                                                                                                                          Perfect score:
                                                                                                                                                                                                                                                                                                                                                   Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score
                                                                                                                  .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum DB
Maximum DB
                                                                                                               OM nucleic
                                                                                                                                                                                                                                                                                                        Seguence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Database
```

1110987654321

Result No.

N

1263

421

1323

461

1383

481

1443

1503

521

501

1563

1623

561

541

1683

581

1743

```
GlnLeuLeuGlyIleCysValTrpPheValValAspProSerHisSerValValAspPhe
                 ThrwetTyrThrThrCysIleValTrpLeuAlaPheIleProIlePhePheGlyThrSer
                                                                                                                                                              CAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTGACGGTCTCCGTGAGTCTGAGC
                                                                                                                                                                       1564 GAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCACCATG
                                                                                                                                                                                                                                               GluGlnAsnValProLysArgLysArgSerLeuLysAlaValValThrAlaAlaThrMet
                                                                                         TACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGCTTC
                                                                                                                           ACCATGTACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCATCTTTTTGGCACCTCA
                                                                                                                                                                                                 GCTTCAGTGCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCATCCTCTTCCACCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                       RECEPTORS
                                                                                                                                                                                                                                                                                                                                                                                            PCT-USS1-09422-19

SGQUENCE 19, Application PC/TUS9109422
SGQUENT IN AUADILIANT: Mulvihili. Eileen R.
APPLICANT: Halen Frederick S.
APPLICANT: Houamed, Khaled M.
APPLICANT: Houamed, Khaled M.
APPLICANT: Almers, Wolfhard
ITILE OF INVERTION: G PROTEIN-COUPLED GLUTAMATE RECE
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend
STREET: California
COUNTRY: San Francisco
STATE: California
COUNTRY: USA
ZIP: 94105-1492
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
COMPUTER: IBM PC Compatible
COMPUTER: IBM PC Compatible
COMPUTER: IBM PC Compatible
COMPUTER: 19911212
STAPLICATION NUMBER: PCT/US91/09422
FILING DATE: 19911212
CLASSIFICATION DATA:
APPLICATION NUMBER: US 07/672,007
FILING DATE: 18-MAR-1991
STIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/672,007
                                                                                                                                                                                                                                                                                                                                             1744 CATGCCATC 1752
                                                                                                                                                                                                                                                                                                                                                               602 HisAlaile 604
                                                                                                                                                                                                                                                                                                                                                                                RESULT 2
PCT-US91-09422-19
                                                                                         1324
                                                                                                                            1384
                                                                                                                                                               1444
 402
                  1204
                                    422
                                                      1264
                                                                       442
                                                                                                                                              482
                                                                                                                                                                                 502
                                                                                                                                                                                                   1504
                                                                                                                                                                                                                    522
                                                                                                                                                                                                                                                       542
                                                                                                                                                         & g
                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                             g
                                                                 ď
                                                                                                      8 à
                                                                                                                                       a
                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                  ℰ
                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                              8
            ð
                               음 장
                                                                                  à
                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               401
                                                                                                                                                                                                                                                                                                                                                                                           783
                                                                                                                                                                                                                                                                                                                                                                                                            281
                                                                                                                                                                                                                                                                                                                                                                                                                              843
                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     341
                            183
                                                               243
                                                                                                 ATTGACGCTGTGTACGCCATGGCCACGCGCTGCACGCCATGCACCGTGACCTGTGTCCC 303
                                                                                                                                     363
                                                                                                                                               423
                                                                                                                                                                                           161
                                                                                                                                                                                                            483
                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                               543
                                                                                                                                                                                                                                                               201
                                                                                                                                                                                                                                                                                  603
                                                                                                                                                                                                                                                                                                   221
                                                                                                                                                                                                                                                                                                                      663
                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                         723
                                                                                                                                                                                                                                                                                                                                                                 321
                                                                         61
                                             81
                                                                                                                                                                                                                                                                                 CAGCTGCTCGGCATCTGCGTGTGGTGCACCCCTCCCCACTCGGTGGTGGTGGTTC
AACCGAGAGGGCATCGGCCTCGGCCTATGAGCAGGGGGAAAGGTGCAGTTCGTG
                                                                                                                                      GGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGCACCCCAGCTGCTTAAGTAC
                                                                                                                                                                         ATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAAACCTTCAATGAGAACGGA
                                                                                                                                                                                 GACGCACCGGGCGCTACGACATCTACCAGTACCAACTGCGCAATGGCTCGGCCGAGTAC
                                                                                                                                                                                                                      AAGGTCATCGCTCGTGCACACACCTGCACCTCAGAATAGAGCGGATGCAGTGGCCA
                                                                                                                                                                                                                                                         TACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAGAAC
                                                                                                                                                                                                                                                                                                                                                                                            CGCACGAGCTGCCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGGCCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                              crececretrecresecreresearcecececacecretresearcacetra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGGCGGCCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1084
                                              62
                                                                184
                                                                                 82
                                                                                                   244
                                                                                                                                                       122
                                                                                                                                                                                           142
                                                                                                                                                                                                                              162
                                                                                                                                                                                                                                                484
                                                                                                                                                                                                                                                                 182
                                                                                                                                                                                                                                                                                   544
                                                                                                                                                                                                                                                                                                    202
                                                                                                                                                                                                                                                                                                                       604
                                                                                                                                                                                                                                                                                                                                       222
                                                                                                                                                                                                                                                                                                                                                          664
                                                                                                                                                                                                                                                                                                                                                                           242
                                                                                                                                                                                                                                                                                                                                                                                                            262
                                                                                                                                                                                                                                                                                                                                                                                                                               784
                                                                                                                                                                                                                                                                                                                                                                                                                                                 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1144
                            124
                                                                                                                     102
                                                                                                                                                                          364
                                                                                                                                                                                                             424
                                                                                                                                                                                                                                                                                                                                                                                            724
            42
                                                                                                                                       304
                                                                                                                8 8
                                                                                                                                                 q
                                                                                                                                                                   8 8 8
                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                             6 8 8
                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                       요
                                                                                                                                                                                                                                                                                                                                                                                     8 &
                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                유
                                          g
                                                               8
                                                                            ద
                                                                                             ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                            ઠે
```

```
1143
                                                                                                                                                                                                                                           1203
                                                                                                                                                                                                                                                                                                    1323
                                                                                                                                                                                                                                                                                                                                 1383
                                                                                                                                                                                                                                                                                                                                                               1443
                                                                                                                                                                                                                                                                                                                                                                                          CAGTCAGCCGACAAGCTGTACATCCACACACACACACGCTCTCCGTGAGTCTGAGC 1503
                                                                                                                                                                                                                                                                                                                                                                                                                      GCTTCAGTGTCCCTGGGGGATGCTCTACATGCCCAAAGTCTACATCATCCTCCTTCCACCG 1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1683
                                                                                                                                                  649
                                                                                                                                                                                               689
                                                                                                                                                                                                                                                                                                                                                                             809
                                                                                                        629
                                                                                                                                                                                                                                                                                     749
                                                                                                                                                                                                                                                                                                                  769
                                                                                                                                                                                                                                                                                                                                                789
                                                                           609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              909
                                                                                        LeuAlaGlyIlePheLeuCysTyrAlaThrThrPheLeuMetIleAlaGluProAspLeu
                                                                                                                                                                                                                                                                       CTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGACCTG
                                 CGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGCGTG
                                                                                                                                                                                                                                                                                                     GACCTGTCCCTCATCTGCCTGCTGGCTACAGCATGCTGCTGATGGTCACGTGTACTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAGCTG
                                      570 ArgThrSerCysGlnProlleProlleValLysLeuGluTrpAspSerProTrpAlaVal
                                                                                                                                                                                                                                                                                                            1744 CATGCCATC 1752
                   250
                                                                                                                                                                                 1024
                                                                                                                                                                                                              1084
                                                                                                                                                                                                                                                                       1204
                                                                                                                                                                                                                                                                                                     1264
                                                                                                                                                                                                                                                                                                                                  1324
                                                                                                                                                                                                                                                                                                                                                                                            1444
                                                                                                                                                                                                                                                                                                                                                                                                          810
                                                                                                                                                                                                                                                                                                                                                                                                                         1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1684
                                724
                                                             784
                                                                           590
                                                                                                                       904
                                                                                                                                     630
                                                                                                                                                                                               670
                                                                                                                                                                                                                             690
                                                                                                                                                                                                                                                                                      730
                                                                                                                                                                                                                                                                                                                                                770
                                                                                                                                                                                                                                                                                                                                                                                                                                      830
    664
                                                                                                                                                                                                                                                                                                                                                                                         8 8 8
   8 8 8
                                         셤
                                                         ò
                                                                       g
                                                                                    õ
                                                                                                     ያ ያ
                                                                                                                                ል ል
                                                                                                                                                              중 음
                                                                                                                                                                                           중 음
                                                                                                                                                                                                                        8 6 8 6 8 8
                                                                                                                                                                                                                                                                                                                             6 8 6
                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                   8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                요 장
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                  183
                                                                                                                                                                                                                                                                                             389
                                                                                                                                                                                                                                                                                                            243
                                                                                                                                                                                                                                                                                                                          409
                                                                                                                                                                                                                                                                                                                                       449
                                                                                                                                                                                                                                                                                                                                                                                                   423
                                                                                                                                                                                                                                                                                                                                                                                                                  469
                                                                                                                                                                                                                                                                                                                                                                                                                                483
                                                                                                                                                                                                                                                                                                                                                                                                                                              489
                                                                                                                                                                                                                                                                                                                                                                                                                                                              543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGAAGACTGTGAAGGGCATGGCTTGCTGCTGGCACTGCGAGCCCTGCACCGGGTACCAG 663
                                                                                                                                                                                                                                                                                                                                                                     GCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGCACCCAGCTGCTTAAGTAC 363
                                                                                                                                                                                                                      63
                                                                                                                                                                                                                                                                                                                                                                                                                                                            124 TTCCATTGCAAGTTGAGCCGCCACGCGTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
                                                                                                                                                                                                                                                                                       184 AACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCAGGAGGGGAAGGTGCAGTTCGTG
                                                                                                                                                                                                                                                                                                                    GlyargValGlyLeuCysProArgMetAspProValAspGlyThrGlnLeuLeuLysTyr
                                                                                                                                                                                                                                                                                                                                                                                                   ATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAACCTTCAATGAGAACGGA
                                                                                                                                                                                                                                                                                                                                                                                                           GGGGTATCATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC
                                                                                                                                                    912
575
2
5
1
                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                       US-10-828-332-6 (1-1755) x PCT-US91-09422-19 (1-912)
FILING DATE: 30-JAN-1991
PRIOR APPLICATION DATA:
PREDICATION DATA:
PREDICATION NUMBER: US 07/626,806
FILING DATE: 12-DEC-1990
ATTORNEY/AGENT INFORMATION:
NAMB: Parmelee, Steven W.
REGISTRATION NUMBER: 31,990.
REFERENCE/DOCKET NUMBER: 31,990.
FELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION 19: 543-543
INFORMATION FOR SEQ ID NO: 19: SEQUENCE CHARACTERISTICS:
LENGT: 912 amino acide
TYPE: AMINO ACID
TOPOLOGY: linear
TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                        Gaps:
                                                                                                                                                  1.75e-239
3050.50
98.97*
98.63*
                                                                                                                                                         Score:
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                              PCT-US91-09422-19
                                                                                                                                           Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                    364
                                                                                                                                                                                                                                                                                                                                                                                                                                              470
                                                                                                                                                                                                                                                                                                                                                                      304
                                                                                                                                                                                                                                                                                                                                                                                    430
                                                                                                                                                                                                                                                                                                                                                                                                                                424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       604
```

ሯ g ઠે g 8 8 8

음 장

ያ ያ

6 B

음 상

8 & B

ઠે g ઠે g


```
GTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCAGGAACTGAGCTACGTGCTG 903
                                                                      CAGGACCAACGACACTTGACCCCCGCTTTGCCAGGGGGCGTGCTCAAGTGCGACATCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                     1384 ACCATGTACACCACCTGCATTGTCTGGCCTGGCCTTCATCCCCATCTTTTTTGGCACCTCA
790 ThrMetTyrThrThrCyslleValTrpLeuAlaPhelleProllePhePheGlyThrSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1444 CACTCAGCCGACAAGCTGTACATCCAGACAACCACACTGACGGTCTCCGTGAGTCTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                             AAGGTCATCGCCTCGTGGACAGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGGCCA
                                       GGGAGTGGCCAGCAGCTGCCATCTGCAGTCTGCCTGCCAGCCGGGAGCGA
                                                                                                                                                                                                                                       CTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGACCTG
                                                                                                                                                                                                                                                                                1324 TACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGCTTC
                                                                                                                                                                      CTGCCCCTCTTCCTGGCCGTGGTGGCCATCGCCGCCACGCTGTTCGTGGTGGTCACGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                     730
                                                                                                                                                                                                                                                                                      650
                                                                                                                                                                                                                                                                                                       1024
                                                                                                                                                                                                                                                                                                                        670
                                                                                                                                                                                                                                                                                                                                                                       1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1504
        484
                                        544
                                                       510
                                                                        604
                                                                                        530
                                                                                                        664
                                                                                                                       550
                                                                                                                                        724
                                                                                                                                                        570
                                                                                                                                                                        784
                                                                                                                                                                                       590
                                                                                                                                                                                                        844
                                                                                                                                                                                                                        610
                                                                                                                                                                                                                                       904
                                                                                                                                                                                                                                                                        964
                                                                                                                                                                                                                                                                                                                                                                                                       1204
                                                                                                                                                                                                                                                                                                                                                                                                                                       1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       830
        8 6
                                                                                                                                                                                                                   임
                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                   6666
                                                                                                                                                                                                                                                                                                                                                                                  8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                 중 점
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8 8
                                     8 8 8
                                                                                  g
                                                                                                       ò
                                                                                                                  g
                                                                                                                                 8
                                                                                                                                                    8 8
                                                                                                                                                                                   ద
                                                                                                                                                                                                   8
                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                 요 상
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                    Sequence 2, Application US/08617785E

Patent No. 6228610

GENERAL INFORMATION:

APPLICANT: Flor, Peter J.

APPLICANT: Flor, Peter J.

APPLICANT: Lindaur, Krieten

APPLICANT: Lindaur, Krieten

APPLICANT: Lindaur, Krieten

APPLICANT: Lindaur, Irene

APPLICANT: Lindaur, Metabotropic Glutamate Receptor Subtypes (HMR4, ITILE OF INVENTION: HMR6, HMR7) and Related DNA Compounds

TITLE OF INVENTION: HMR6, HMR7) and Related DNA Compounds

FILE REFRENCE: 4-19679/A/PCT

CURRENT APPLICATION NUMBER: US/08/617,785E

CURRENT FILING DATE: 1994-09-07

EARLIER APPLICATION NUMBER: PCT/EP94/02991

EARLIER PILING DATE: 1994-09-07

EARLIER PILING DATE: 1993-09-20

NUMBER OF SEQ ID NOS: 26

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 2: 26

SEQ ID NO 2: 26

SEQ ID NO 2: 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               469
                                                                                                                                                                                                                                                                                                                                                             349
                                                                                                                                                                                                                                                                                                                                                                                                                              389
                                                                                                                                                                                                                                                                                                                                                                                                                                                               409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               489
                                                                                                                                                                                                                                                                                                                                                                                               369
                                                                                                                                                                                                                                                                                                                                                                                                               183
                                                                                                                                                                                                                                                                                                                                                                                                                                                243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                363
                                                                                                                                                                                                                                                                                                                                                63
                                                                                                                                                                                                                                                                                                                                              AGCCGCACGCTGGACAACAACAGCGCAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGCACCCCAGCTGCTTAAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                AACCGAGAGCGCATCGGCAGGACTCGGCCTATGAGCAGGAGGGAAGGTGCAGTTCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTGACGCTGTGTACGCCATGGCCCTGCACGCCATGCACCGTGACCTGTGTCCC
                                                                                                                                                                                                                                                                        912
564
6
112
1
                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                               US-10-828-332-6 (1-1755) x US-08-617-785-2 (1-912)
                                                                                                                                                                                                                                                                     9.63e-236
3004.50
97.77%
96.74%
         912
                                                                                                                                                                                                                        ; LENGTH: 912
; TYPE: PRT
; ORGANISM: Homo sapiens
US-08-617-785-2
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                Alignment Scores:
Pred. No.:
                        RESULT 3
US-08-617-785-2
                                                                                                                                                                                                                                                                                                                                                                330
                                                                                                                                                                                                                                                                                                                                                                                64
                                                                                                                                                                                                                                                                                                                                                                                               350
                                                                                                                                                                                                                                                                                                                                                                                                                124
                                                                                                                                                                                                                                                                                                                                                                                                                               370
                                                                                                                                                                                                                                                                                                                                                                                                                                                184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               470
                                                                                                                                                                                                                                                                                Score:
         셤
                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                             음 상 음
                                                                                                                                                                                                                                                                                                                                                                                                                                           $ A $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
```

409 303 429 449

183

```
364 ATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAACCTTCAATGAGAACGGA 423
                                                                                                                                                                                                                                                                                                                                                                                                                         GGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGCATGGCACCCAGCTGCTTAAGTAC 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGGCGGGCATCTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGACCTG
                                                                                                                                            244 ATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGCCATGCACCGTGACCTGTGTCCC
                                                                                                                                                                                                  964 GGGACCTGTTCGCTCCCCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCGGCC
                                                                   370 PheHiaCysLysLeuSerArgHisAlaLeuLysLysGlySerHisValLysLysCysThr
                                                                                                  AACCGAGAGCGCATCGGCCAGGACTCGGCCTATGAGCAGGAGGGAAGGTGCAGTTCGTG
                                                                                                                                                          410 IleAspAlaValTyrAlaMetGlyHisAlaLeuHi8AlaMetHi8ArgAspLeuCysPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                           TACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGCCCCTCTTCCTGGCCGTGGTGGCATCGCCGCCACGCTGTTCGTGGTGGTCACGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTGCTG
                                                       TTCCATTGCAAGTTGAGCCGCCACACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
                                                                                                              AsnArgGluArgIleGlyGlnAspSerAlaTyrGluGlnGluGlyLysValGlnPheVal
                                                                                                                                                                                                                                                                                                                                                                                                                AAGAAGACTGTGAAGGGCATGGCTTGCTGCTGCCACTGCGAGCCCTGCACCGGGTACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCTGCCCTGCCAGCCCGGGGAGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATCACCTTCATCTCATCTCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1084
                                                       124
                                                                                                  184
                                                                                                                       390
                                                                                                                                                                                         304
                                                                                                                                                                                                             430
                                                                                                                                                                                                                                                                               424
                                                                                                                                                                                                                                                                                                    470
                                                                                                                                                                                                                                                                                                                                                                      544
                                                                                                                                                                                                                                                                                                                                                                                                                 604
                                                                                                                                                                                                                                                                                                                                                                                                                                     530
                                                                                                                                                                                                                                                                                                                                                                                                                                                           664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              069
            8 6
                                                       8 6
                                                                                                ò
                                                                                                               셤
                                                                                                                                     ઠે
                                                                                                                                                             ద
                                                                                                                                                                                      ò
                                                                                                                                                                                                        ద
                                                                                                                                                                                                                             ठ
                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                    &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                             1683
                                                                                     869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             330 GlyAlaValThrIleLeuProLysArgMetSerValArgGlyPheAspArgTyrPheSer 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    63
TCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAATGGGGGAAGCCAAATCAGAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7 GGGGTATCATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC
                                                                                                                                                                                                                               APPLICANT: BELAGAJE, RAMA M.
WU, SU
TITLE OF INVENTION: EXCITATORY AMINO ACID RECEPTOR PROTEIN
AND RELATED NUCLEIC ACID COMPOUNDS
                                                                                                                                                                                                                                                                                                                                            COUNTY: UNITED STATES OF AMERICA
ZIP: 46285
COMPUTER READABLE FORM:
MEDIUM TYPE: Ploppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/641,318
FILING DATE: 18-Aug-2000
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   912
564
6
12
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08/816,178A
FILING DATE: 12-MAR-1997
ATTORNEY/AGANT INFORMATION:
NAME: GAYLO, PAUL J.
REGISTRATION NUMBER: 36,808
REFERENCE/DOCKET NUMBER: X-10579
TELECOMMUNICATION INFORMATION:
TELEPHONE: (317) 276-0756
TELEX: (317) 276-3861
INFORMATION FOR SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-828-332-6 (1-1755) x US-09-641-318-2 (1-912)
                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSES: ELI LILLY AND COMPANY
STREET: LILLY CORPORATE CENTER
CITY: INDIANAPOLIS
STATE: INDIANA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID
                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 912 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9.63e-236
3004.50
97.77%
96.74%
90.96%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear
                                                                                                                                 1744 CATGCCATC 1752
                                                                                                                                              |||||||||
910 HisAlaIle 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-641-318-2
                                           1624
                    셤
                                                          g
                                                                                                         g
                                                                                                                                                    셤
                                            ઠે
                                                                                      ઠે
                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
```

509

603 529 663 723

783 589 843

609 903 629 963


```
124 TICCATIGCAAGTIGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
                                                                                                                         AACCGAGGGCATCGGCCAGGACTCGGCCTATGAGCAGGAGGGGAAGGTGCAGTTCGTG
                                                                                                                                                                                                                                                                                                                                 604 AAGAAGACTGTGAAGGGCATGCTTGCTGCTGCCACTGCGAGCCCTGCACCGGGTACCAG
                                                                                                                                                                                                                                                                                                                                       AAGGTCATCGGCGTCGTGGACCAGCTCCTCCAGAATAGAGCGGATGCAGTGGCCCA
     912
6 4
1 1 2
1 1
     Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                   US-10-828-332-6 (1-1755) x US-09-817-464-2 (1-912)
     9.63e-236
3004.50
97.77%
96.74%
                  Percent Similarity:
Best Local Similarity:
Scores
                                                                                                                                                                                                                                                                                                                                              530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               630
                                                               7
                                                                            330
                                                                                                                                             184
                                                                                                                                                          390
                                                                                                                                                                                                304
                                                                                                                                                                                                             430
                                                                                                                                                                                                                                                                             484
                                                                                                                                                                                                                                                                                                        544
                                                                                                                                                                                                                                                                                                                   510
                                                                                                                                                                                                                                                                                                                                                                                                               784
                                                                                                                                                                                                                                                                                                                                                                                                                            590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  904
                               Query Match:
DB:
Alignment So
Pred. No.:
                                                                         8 8
                                                                                                  g
                                                                                                               6 6 6 6 6 6
                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                              8 6 8
                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                    중 음
                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                8 8
                                                               ò
                                                                                                                                                                                                                          5 8
                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                            ⋧
                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                    1623
                                                   1323
                                                                                                       1443
                                                                                                                                 1503
                                                                                                                                                          1563
                                                                                                                                                                                                              1683
                                                                                                                                                                                                                                       1743
                                                                             1383
                                                                                                                                                                                               869
                                                                                                                                                                                                                          889
                                                                769
                                                                                                                   809
                                                                                                                                             829
                                                                                                                                                                       849
                                                                                                                                                                                                                                       GCTTCAGTGTCCCTGGGGGTGCTCTACATGCCCAAAGTCTACATCATGCTCTTCCACCG
                                                                                                                                                                                    GACCTGTCCCTCATCTGCCTGCTGGCTACAGCATGCTGCTGATGGTCACGTGTACTGTG
                                                         Sequence 2, Application US/09817464

Sequence 2, Application US/09817464

Retent No. 6515107

GENERAL INFORMATION:

APPLICANT: FULLY PELE J.

APPLICANT: Lindaur, Kristen

APPLICANT: Manier

APPLICANT: Manier

TITLE OF INVENTION: Human Metabotropic Glutamate Receptor Subtypes (HMR)

TITLE OF INVENTION: Human Metabotropic Glutamate Receptor

TITLE OF INVENTION: Human Metabotropic Glutamate Receptor

CURRENT APPLICATION NUMBER: US/09/817,464

CURRENT FILING DATE: 1096-03-19

EARLIER FILING DATE: 1996-03-19

EARLIER FILING DATE: 1994-08-19

EARLIER FILING DATE: 1993-09-20

NUMBER OF SEQ ID NOS: 26

SEQ ID NO 2

LENGHH: 912

MANIER DECEMBRED

LENGHH: 912
                                                                                                                                                                                                                                                                 1744 CATGCCATC 1752
                                                                                                                                                                                                                                                                         |||||||||
910 HisAlaile 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
CORGANISM: Homo sapiens
US-09-817-464-2
                                                                                                                                                                                                                                                                                           RESULT 5
US-09-817-464-2
                                                                                                      1384
                          1204
                                                                             1324
                                                                                                                                 1444
                                                                                                                                                           1504
                                                                                                                                                                                    1564
                                                                                                                                                                                                              1624
                                                                                                                                                                                                                                       1684
 1144
                                      730
                                                   1264
                                                                                                                    790
                                                                                                                                              810
                                                                                                                                                                       830
                                                                                                                                                                                                 850
                                                                                                                                                                                                                           870
                                  q
                                                            q
                                                                         8 B 8
                                                                                                               8 8 8 8
                                                                                                                                                                    8 8 8
                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                             g
          셤
                        ò
                                              8
```

a

엄

8 ద ઠે

ઠે

a

엄

ઠે

ద

ઠે

임

ઠે

g

ç

요

ઠે

셤

ઠે

셤

ઠે g ò

ò

g

ò

```
AGCCGCACGCTGGACAACAACAGCGCAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGGCCA 543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGGTATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ||| ::: ||||||| ||| GlyalavalThrIleLeuProLysArgAlaSerIleAapGlyPheAspArgTyrPheArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     244 ATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGCCATGCACCGTGACCTGTGTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGCACCCAGCTGCTTAAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACGCACCGGGGCCCTACGACATCTACCAGTACCAACTGCGCAATGGCTCGGCCGAGTAC
COMPUTER: Floppy disk
MEDIUM TYPE: Floppy disk
COMPUTER: BLM PC compatible
COMPUTER: BLM PC compatible
COMPUTER: BLM PC compatible
COPERATIOS SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/855,146
FILING DATE: US/08/855,146
TILING DATE: US/08/855,146
FILING DATE: US/08/851,146
APPLICATION NUMBER: US/08/21,243
FILING DATE: US/05/WATION:
REGISTRATION NUMBER: 39,872
REPRENCE/COCKET NUMBER: X-10836
TELECOMMUNICATION NUMBER: X-10836
TELECOMMUNICATION NUMBER: X-10836
TELECOMMUNICATION NUMBER: US/05/WATION SEQUENCE (317) 276-6334
INPORMATION FOR SEQ ID NO: 2: SEQUENCE CHRAACTERISTICS:
LENGTH: 908 amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: Amino acids
TYPE: Amino acids
                                                                                                                                                                                                                                                                                                                                                                                                          908
286
208
208
208
208
                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-828-332-6 (1-1755) x US-08-855-146-2 (1-908)
                                                                                                                                                                                                                                                                                                                                                                                                         3.69e-184
2370.00
84.91
74.96
                                                                                                                                                                                                                                                                                                                                                , MOLECULE TYPE: protein US-08-855-146-2
                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                            1083
                                                                                                                                                                                                                                                                                                                                                                                                            1443
                                                                                                                  GCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATCACCTTCATCCTCATCTCCCTG 1143
                                                                                                                                                                                                                                                                                           1323
                                                                                                                                                                                                                                                                                                                                                   1383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1683
                                                                                                                                                                            CAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGACCCCTCCCACTCGGTGGTGGACTTC 1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1623
                                  699
                                                                                                                                                                                                                                    CAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGGCGTGCTCAAGTGCGACATCTCG 1263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACAGACCTACGTCACCTACACCAAC 1743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             606
                                                                                         689
                                                                                                                                               709
                                                                                                                                                                                                        729
                                                                                                                                                                                                                                                                749
                                                                                                                                                                                                                                                                                                                      769
                                                                                                                                                                                                                                                                                                                                                                              789
                                                                                                                                                                                                                                                                                                                                                                                                                                        803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GINLEULEUGIJIIECÇSVAlTrpPheValValAspProSerHisSerValValAspPhe
                                                                                                                                                                                                                                                                                                                                                                                                         TACGCCATCAAGACCCCAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGCTTC
                                                                                                                                                                                                                                                                                                                                                                 AlaSerValSerLeuGlyMetLeuTyrMetProLysValTyrIleIleLeuPheHisPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCATCCTCTTCCACCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCACCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCAACAAGTTCACACAGGGCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 6
US-00-855-146-2
; Sequence 2, Application US/08855146
; Patent No. 6221609
; GENERAL INFORMATION:
; APPLICANT: Belaggle, Rama M.
; TITLE OF INVENTION:
; TITLE OF INVENTION: EXCITATORY AMINO ACID RECEPTOR PROTEIN
; TITLE OF INVENTION: AND RELATED NUCLEIC ACID COMPOUNDS
; NUMBER OF SEQUENCES: 17
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Eli Lilly and Company
; STREET: Lilly Corporate Center/Patent Department
; CITY: Indianapolis
; STATE: IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATGCCATC 1752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ||||||||||||
HisAlaile 912
                                                            1024
                                                                                                                   1084
                                                                                                                                                                            1144
                                                                                                                                                                                                                                    1204
                                                                                                                                                                                                                                                                                           1264
                                                                                                                                                                                                                                                                                                                                                  1324
                                                                                                                                                                                                                                                                                                                                                                                                          1384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1744
                                                                                                                                                                                                                                                               730
                                                                                                                                                                                                                                                                                                                      750
                                                                                                                                                                                                                                                                                                                                                                              770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      910
```

346

183 385 243 405 303 445

363

465

483

```
1624 TCCAACAAGTTCACACAGAAGGCCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAGCTG
          TGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACAGACCTACGTCACCTACACCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7 GGGGTATCATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            908
430
53
2
2
                                                                                                                                                                                                               APPLICANT: Stormann, Thomas M.
APPLICANT: Simin, Rachel T.
APPLICANT: Simin, Rachel T.
APPLICANT: Hammerland, Lance G.
APPLICANT: Huller, Forrest H.
TITLE OF INVENTION: NOVEL HUMAN METABOTROPIC
TITLE OF INVENTION: GLUTAMATE RECEPTOR
NUMBER OF SEQUENCES: 16
CORRESSED: Lyon & Lyon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-828-332-6 (1-1755) x US-08-823-110-1 (1-908)
                                                                                                                                                                                                                                                                                                                                                                                          COUNTITY 0.5.4.

ZIP: 90071-2066

COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: 1.5" Diskette, 1.44 Mb
SOFTWARE: FEASTSE OF WINGOWS 2.0
CURRENT APPLICATION NUMBER: 108/08/32,110
FILING DATE: March 24, 1997
CLASSIFTCATION NUMBER: 08/604,298
FILING DATE: FEBRUARY 21, 1996
ATTORNEY/AGENT INFORMATION:
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 32,327
TELECOMMUTICATION:
MEDIUM TYPE: MARCH 1870410191
                                                                                                                                                    RESULT 7
US-08-823-110-1
US-08-823-110-1
; Sequence 1, Application US/08823110
; Patent No. 6077675
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                               ADDRESSEE: Lyon Elyon
STREET: 633 West Fifth Street
STREET: Suite 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9.58e-181
2328.00
85.34%
75.97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE: (213) 489-1600
TELEFAX: (213) 955-0440
TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 908 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: Peptide
                                                                                                   1744 CATGCCATC 1752
                                                                                                                            906 Hisserile 908
                                                                                                                                                                                                                                                                                                                                                           CITY: Los Angeles
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity:
                                                                                                                                                                                                                                                                                                                                                                                     U.S.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                   1684
                                                                           988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local
                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                  유
                                                 ઠે
                                                                    8
                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATCACCTTCATCTCATCTCCCTG 1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1204 CAGGACCAACGGACACTIGACCCCCCGTTTGCCAGGGCGTGCTCAAGTGCGACATCTCG 1263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACCTGTCCCTCATCTGCCTGCTGGCTACAGCATGCTGCTGATGGTCACGTGTACTGTG 1323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCATGTACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCATCTTTTTTGGCACCTCA 1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1623
                                                                                                                                                                                                                                                                                                                                                                         GGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCGGCC 1023
                                                                                                                                                                                                                                                                                                                                                                                                                          CAGCTGCTCGGCATCTGCGTGTGGGTTCGTGGTGGACCCCTCCCACTCGGTGGTGGACTTC 1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               865
                                                                                                                                                                                                                                                                                                                                                                                     783
                                                                                                                                                                                            585
                                                                                                                                                                                                                   843
                                                                                                                                                                                                                                             605
                                                                                                                                                                                                                                                                      903
                                                                                                                                                                                                                                                                                  CTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGACCTG 963
                                                                                                                                                                                                                                                                                                                                             LeuThrGlyilePheLeuCysTyrSerIleThrPheLeuMetileAlaAlaProAspThr 645
                                                                                                                TACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAGAAC 723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AlaSerValSerLeuGlyMetLeuTyrMetProLysValTyrIleIleIlePheHisPro
                                                               AAGAAGACTGTGAAGGGCATGCTTGCTGCTGCACTGCGAGCCCTGCACCGGGTACCAG
                                                                                                                                CGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGGCCCGTG
                                                                                                                                                                                GTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TACGCCATCAAGACCCCGAGGCGTGCCCGAGACCTTCAACGAGGCCCAAGGCCCATCGGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGTCAGCCGACAAGCTGTACATCCAGACAACCACTGACGGTCTCCGTGAGTCTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCATCCTCCTTCCACCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCACATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1564
                                                                                                                 664
                                                                                                                                           546
                                                                                                                                                                    724
                                                                                                                                                                                                                                                                                               909
                                                                                                                                                                                                                                                                                                                        904
                                                                                                                                                                                                                                                                                                                                                626
                                                                                                                                                                                                                                                                                                                                                                                                                           1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1504
                                                                                                                                                                                            999
                                                                                                                                                                                                                                                                      844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  846
                                                                604
                                                                                                                                                                                                                                       ద
                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                 셤
                                                               ઠે
                                                                                  임
                                                                                                        8
                                                                                                                                   g
                                                                                                                                                                 ò
                                                                                                                                                                                    셤
                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
```

808

785

1323

1503

```
1324 TACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGCTTC 1383
                                                                                                                                                                                                                                                                                          GAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCGCCACCATG 1623
                                                                                                                                                                                                                                                                                                                                        686 AlaProLysPheIleSerProAlaSerGlnLeuValIleThrPheSerLeuIleSerVal
                                                          1204 CAGGACCAACGGACACTIGACCCCCGCTTTGCCAGGGGCGTGCTCAAGTGCGACATCTCG
                                                                     GACCTGTCCCTCATCTGCCTGCTGCTACAGCATGCTGCTGATGGTCACGTGTACTGTG
                                                                                                                                                                                                                                                                                                                               1624 TCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAGCTG
                                                                                                                                               Sequence 1, Application US/08604298
Patent No. 6084084
GENERAL INFORMATION:
APPLICANT: Stormann, Thomas M.
APPLICANT: Simin, Rachel T.
APPLICANT: Hammerland, Lance G.
APPLICANT: Hammerland, Lance G.
APPLICANT: Fuller, Forrest H.
TITLE OF INVENTION: GLUTAMATE RECEPTOR
INTERFORMER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
ADDRESSE: Lyon & Lyon
STREET: Suite 4700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: U.S.A.
ZIP: 90071-2066
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM Compatible
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: FastSEQ for Windows 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/604,298
FILING DATE: February 21, 1996
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                     TGTGAGAACCTGGAGACC 1701
                                                                                                                                                                                                                                                                                                                                                                              CITY: Los Angeles
STATE: California
                       1144
                                        904
                                                                                                 1264
                                                                                                                                                                                                                1444
                                                                                                                                                                                                                                                     1504
                                                                                                                                                                                                                                                                      826
                                                                                                                                                                                                                                                                                           1564
                                                                                                                                                                                                                                                                                                                                                                     1684
                                                                                                                                                        994
                                                                                                                                                                                                                                   908
                6 6 6
                                                                         g
                                                                                              ò
                                                                                                             중 음
                                                                                                                                                   6 ይ
                                                                                                                                                                                       셤
                                                                                                                                                                                                         Š
                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATCACCTTCATCCTCTG 1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             964 GGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCGGCC 1023
                                                                 445
                                                                                                                                                                                                                                                              483
                                                                                                                                                                                                                                                                                                                                                                                                545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                665
                                                                                                           243
                                                                                                                           405
                                                                                                                                              303
                                                                                                                                                                                    363
                                                                                                                                                                                                                         423
                                                                                                                                                                                                                                             465
                                                                                                                                                                                                                                                                        603
                                                                                                                                                                                                                                                                                                                                                           525
                                                                                                                                                                                                                                                                                                                                                                                                                   723
                                                                                                                                                                                                                                                                                                                                                                                                                                      565
                                                                                                                                                                                                                                                                                                                                                                                                                                                         783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGGTCATCGGCTCGTGGACAGACCACCTGCACATAGAATAGAGCGGATGCAGTGGCCA 543
                                                                                                                                                                                                                                                                                                                                                                              AAGAAGACTGTGAAGGGCATGGCTTGCTGCTGCCTGCGAGCCCTGCACCGGGTACCAG 663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCCGCACGCTGGACAACAACAGCGCAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC
||| ::: ||||||| ||| 327 GlyAlaValThrIleLeuProLysArgAlaSerIleAspGlyPheAspArgTyrPheArg
                                                                                                                                                                                              386 GlybeuGluArglleAlaArgABpSerSerTyrGluGluGlyGlyGyalglnPheval
                                                                                                                                                                                                                                   184 AACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCAGGAGGGGAAGGTGCAGTTCGTG
                                                                                                                                             ATTGACGCTGTGTACGCCATGGGCCACGCCTGCACGCCATGCACCTGTGTCCC
                                                                                                                                                                                   GGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGCACCCAGCTGCTTAAGTAC
                                                                                                                                                                                                                        ATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAACCTTCAATGAGAACGGA
                                                                                                                                                                                                                                                             GACGCACCGGGCGCTACGACATCTACCAGTACCAACTGCGCAATGGCTCGGCCGAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                   TACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGGCCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGCCCCTCTTCCTGCCGTGGTGGCATCGCCGCCACGCTGTTCGTGGTGGTCACGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGGCGGGCATCTTTCTGTGCTACGCACTACCTTCCTCATGATCGCAGAGCCGGACCTG
                                                                                                                                              244
                                                                                                                                                                                                                                                                                                   484
                              64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1024
                                                                                                                                                                                  304
                                                                                                                                                                                                     426
                                                                                                                                                                                                                        364
                                                                                                                                                                                                                                                             424
                                                                                                                                                                                                                                                                                                                     486
                                                                                                                                                                                                                                                                                                                                                           909
                                                                                                                                                                                                                                                                                                                                                                              604
                                                                                                                                                                                                                                                                                                                                                                                               526
                                                                                                                                                                                                                                                                                                                                                                                                                   664
                                                                                                                                                                                                                                                                                                                                                                                                                                     546
                                                                                                                                                                                                                                                                                                                                                                                                                                                        724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    999
           셤
                             ò
                                          셤
                                                                 ò
                                                                                a
                                                                                                  ઠે
                                                                                                                      a
                                                                                                                                            ò
                                                                                                                                                           셤
                                                                                                                                                                             ઠે
                                                                                                                                                                                                 요
                                                                                                                                                                                                                      8 8
                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                              중 음
                                                                                                                                                                                                                                                                                                                                                     요
                                                                                                                                                                                                                                                                                                                                                                            è
                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                              ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                8 & 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ያ ያ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
```

```
1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1683
                                                                                                                                                                                                                                                                                                  1023
                                                                                                                                                                                                                                                                                                                                                          1083
                                                                                                                                                                                                                                                                                                                                                                                                                    1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1623
                                                                                                                                                                                                                                         963
                                                                                                                                                                                                                                                                     645
                                                                                                                                                                                                                                                                                                                                                                                       685
                                 565
                                                             783
                                                                                          585
                                                                                                                       843
                                                                                                                                                    605
                                                                                                                                                                                 903
                                                                                                                                                                                                           625
                                                                                                                                                                                                                                                                                                                             665
                                                                                                                                                                                                                                                                                                                                                                                                                                              705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       865
                                                                                                                                                                                                                                        CTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGCCGGACCTG
                                                                                                                                                                                                                                                                                                                   GCCCCGGGTTTCATCAGCCCGGCCTCGCAGCTGGCCATCACCTTCATCCTCATCTCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1144 CAGCTGCTCGGCATCTGCGTGTTCGTGGTGGACCCCTCCCACTCGGTGGTGTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1564 GAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCACCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAGAAC
                      CGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGGCCGTG
                                                                               creccercricerosceroscereses are consecuent and are consecuent and are consecuent and are consecuent and are consecuent as a consecuent and are consecuent as a consecuent and are consecuent as a consecuent as
                                                                                                                                                                                 GTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGTGAGAACCTGGAGACC 1701
|||||||:::||||||||
CysGluSerLeuGluThr 891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1444
                                                                                                                                                                                                                                                                                                                                                               1024
         664
                                   546
                                                                724
                                                                                             999
                                                                                                                          784
                                                                                                                                                       586
                                                                                                                                                                                    844
                                                                                                                                                                                                              909
                                                                                                                                                                                                                                           904
                                                                                                                                                                                                                                                                        626
                                                                                                                                                                                                                                                                                                                                                                                                                       1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                 989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                                                 8 & 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6 B 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                   ℰ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   음 장
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                           g
                                                          S 8
                                                                                                                 ò
                                                                                                                                               셤
                                                                                                                                                                                 8
                                                                                                                                                                                                      윤
                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             423
                                                                                                                                                                                                                                                                                                                                                                                                                                       63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |||| ::: ||||||| ||| GlyAlaValThrIleLeuProLysArgAlaSerIleAapGlyPheAspArgTyrPheArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGAAGACTGTGAAGGGCATGCTTGCTGCTGCACTGCGAGCCCTGCACCGGGTACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGGTATCATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCCGCACGCTGGACAACAACAGGCGCAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCAGGAGGGGGAAAGGTGCAGTTCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GlyLeuGluArg11eAlaArgABpSerSerTyrGluGlnGluGlyLy8ValGlnPheVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGCCGCGTAGGACTCTGCCTCGCATGGACCCCGTGGATGGCACCCAGCTGCTTAAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACGCACCGGGGCGCTACGACATCTACCAGTACCAACTGCGCAATGGCTCGGCCGAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGGTCATCGGCTCGTGGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGGCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGAGTGGCCAGCTGCCGCGCTCCATCTGCAGTCTGCCCTGCCAGCCGGGGGGGA
                                                                                                                                                                                                                                                                                                      908
430
53
81
2
                                                                                                                                                                                                                                                                                                     Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                           US-10-828-332-6 (1-1755) x US-08-604-298-1 (1-908)
                                                                                                                                                                                                                                                                                                                                                                                Gaps:
APPLICATION NUMBER:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Warburg Kichard J.
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 212/044
TELECOMMUNICATION INFORMATION:
TELEFAX: (213) 489-1600
TELEFAX: (213) 955-0440
TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 908 amino acids
manne. maino acids
                                                                                                                                                                                                                                                                                                     9.58e-181
2328.00
85.34%
75.97%
                                                                                                                                                                                                   TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                               MOLECULE TYPE: Peptide
                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                  ; MOLECULE TY
US-08-604-298-1
                                                                                                                                                                                                                                                                                                                                                                                                                                       7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       424
                                                                                                                                                                                                                                                                                                        Pred. No.:
Score:
```

g

ઠે

8 8 8

g

ઠે

8 8

a

മ് ò

δ

8 8 8 유

ò

ઠે

8

8 g

720

551

840

611

591

780

```
GTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGC 1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGCAGCTGCTCGGCATCTGCGTGGTTCGTGGTGGACCCCTCCCACTCGGTGGTGGAC 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1261 TCGGACCTGTCCCTCATCTGCCTGCTGGCTACAGCATGCTGATGGTCACGTGTACT 1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACAGTGACGGTCTCCGTGAGTCTG 1500
                                                                                                                                                                                                                                                                                 CAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAG
                                                                                                                                GTGCTGCCCCTCTTCCTGGCCGTGGTGGGCATCGCCGCCACGCTGTTCGTGGTGGTCACG
                                                                                                                                                                                                                                                                                                                                                       CGAAAGAAGACTGTGAAGGGCATGCTTGCTGCCACTGCGAGCCCTGCACCGGGTAC
                                                                                                                                                                       AACCGCACGAGCTGCCCAGCCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGGCC
                                                                                                                                                                                                                                            CTGCTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATCATCTTCATCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 199
                                                                                                                                                                                                                                                       592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    812
                                  512
                                                                                                                                            552
                                                                                                                                                                       721
                                                                                                                                                                                                  572
                                                                                                                                                                                                                             781
                                                                                                                                                                                                                                                                                  841
                                                                                                                                                                                                                                                                                                             612
                                                                                                                                                                                                                                                                                                                                          901
                                                                                                                                                                                                                                                                                                                                                                  632
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1561
                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 852
                        셤
                                                    ઠે
                                                                              ద
                                                                                                                 δ
                                                                                                                                     g
                                                                                                                                                             ઠે
                                                                                                                                                                                            В
                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                ద
                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                                                                                      Пр
                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                             유
                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  දි දි
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  음 장
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
Sequence 12, Application US/08617785E

Sequence 12, Application US/08617785E

Patent No. 6228610

GENERAL INFORMATION:

APPLICANT: Kuhn, Ranier

APPLICANT: Lindaur, Kristen

APPLICANT: Lindaur, Kristen

APPLICANT: Lindaur, Kristen

APPLICANT: Knopfel, Thomas

TITLE OF INVENTION: Human Metabotropic Glutamate Receptor Subtypes (HWR4, ITTLE OF INVENTION: HWR6, HWR7) and Related DNA Compounds

FILE REFERENCE: 4-19679/A/PCT

CURRENT APPLICATION NUMBER: PCT/EP94/02991

EARLIER APPLICATION NUMBER: PCT/EP94/02991

EARLIER PILING DATE: 1994-09-07

EARLIER APPLICATION NUMBER: EPO 9416553.7

EARLIER APPLICATION NUMBER: EPO 93810663.0

EARLIER PILING DATE: 1993-09-20

NUMBER OF SEQ ID NOS: 26

SOFTWARE: PatentIN Ver. 2.0

TYPE: PRICE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCCGCACGCTGGACAACAACAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGCCGCGTAGGACTCTGCCTCGCATGGACCCCGTGGATGGCACCCAGCTGCTTAAGTAC 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABPTyrArgGlyValCysProGluMetGluGlnAlaGlyGlyLysLysLeuLeuLysTyr 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGGTATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ||||::|||||||||:
| PheAsnCysLysLuthrIleSerGlySerLysLysGluAspThrAspArgLysCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAACCTTCAATGAGAACGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GACGCACCGGGGCGCTACGACATCTACCAGTACCAACTGCGCAATGGCTCG---GCCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                               915
408
74
100
2
                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-828-332-6 (1-1755) x US-08-617-785-12 (1-915)
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gapa:
                                                                                                                                                                                                                                                                                                                                                                                           6.99e-172
2219.00
82.53%
69.86%
67.18%
                                                                                                                                                                                                                                                                                                                                       ; ORGANISM: Homo sapiens
US-08-617-785-12
                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             중 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
```

1020

960

651

1080

691

1440

811

791

751

771

1560

831

491

451

```
1081 AGTGCCCGCGTTTCATCAGCCCGGCCTGGCTGGCCATCACCTTCATCTCATCTCC 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCG 1020
                                                           GlykysglyvalArgGlulleProAlaSerValCysThrLeuProCysLysProGlyGln
                                                                                                                                                                                                                                                                                                                                                               CIGCIGGCGGGCATCTITCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                    1141 CTGCAGCTGCTCGCCATCTGCGTGGTTCGTGGTGGACCCCTCCCACTCGGTGGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCACCATGTACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCATCTTTTTTGGCACC
                   |||:::::|||||| ||||||||| TranspalureuGlnLeuAsnileGluAspMetGlnTrp
                                                                                                                                                CCAGGGAGTGGCCAGCAGCTGCGCGCTCCATCTGCAGTCTGCCCTGCCAGCCCGGGGAG
                                                                                                                                                                                                     CAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCCACAGAG
                                                                                                                                                                                                                                               AspTyrArgGlyValCysProGluMetGluGlnAlaGlyGlyLysLysLysLeuLeuLysTyr
                                                                                                        TACAAGGTCATCGGCTCGTGGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGG
                                                                                                                                                                                          CGAAAGAAGACTGTGAAGGGCATGGCTTGCTGCTGCCACTGCGAGCCCTGCACCGGGTAC
                                                                                                                                                                                                                                                                             AACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGGCC
                                                                                                                                                                                                                                                                                                                       Greenececentricengecegregacynegececececececacy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1261
                                                              424
                                                                                  472
                                                                                                        481
                                                                                                                             492
                                                                                                                                                                     512
                                                                                                                                                                                           601
                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                             721
                                                                                                                                                                                                                                                                                                 572
                                                                                                                                                                                                                                                                                                                       781
                                                                                                                                                                                                                                                                                                                                             592
                                                                                                                                                                                                                                                                                                                                                                                                           901
                                                                                                                                                                                                                                                                                                                                                                                                                                                    961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6 8 6 8 6 8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8 6
8 à
                                   음 중 음
                                                                                                જ
                                                                                                                    8 6 8
                                                                                                                                                                                   8 6 8 6
                                                                                                                                                                                                                                                                      र्घ क्ष द
                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                8 8
                                                                                                                                                                                                                                                                                                                                                                                                 ે
                                                                                                                                                                                                                                                                                                                                                                                                                         8 6 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8 8 8
                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Flor, Peter J.
APPLICANT: Flor, Peter J.
APPLICANT: Flor, Peter J.
APPLICANT: Lindaur, Kristen
APPLICANT: Lindaur, Kristen
APPLICANT: Lindaur, Kristen
APPLICANT: Thomas
ITILE OF INVENTION: Human Metabotropic Glutamate Receptor Subtypes (HMR4,
ITILE OF INVENTION: HMR6, HMR7) and Related DNA Compounds
ITILE OF INVENTION: HMR6, HMR7) and Related DNA Compounds
ITILE OF INVENTION: HMR8, HMR7) and NAMER: US/09/817,464
CURRENT PAPLICATION NUMBER: US/09/817,464
CURRENT PAPLICATION NUMBER: EPO 9416553.7
EARLIER APPLICATION NUMBER: EPO 9416553.7
EARLIER PILING DATE: 1994-08-19
EARLIER PILING DATE: 1994-08-19
EARLIER PILING DATE: 1994-08-19
EARLIER PILING DATE: 1993-09-20
NUMBER OF SEQ ID NOS: 26
SOFTWARE: PatentIN Ver. 2.0
SEQ ID NO 12
                                         CTGTGTGAGAACCTGGAGCCCCAGCGTGGCTACCAAACAGACCTACGTCACCTACACC 1740
 ATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAG 1680
                                                     ||||||||||||||::::::
|LeuCysGluAsnValAspProAsnSerProAlaAlaLysLysLysLysTyrValSerTyrAsn 911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTGACGCTGTGTGTACGCCATGGCCACGCGCTGCACGCCATGCACGCGGGACCTGTGTCCC 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGCACCCAGCTGCTTAAGTAC 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCCGCACGCTGGACAACAGGCGCAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       351
           |||
|GlyAlaileThrileGlnProLy8ArgAlaThrValGluGlyPheA8pAlaTyrPheThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ||||:::||||||||||::
PheAsnCysLysLuThrIleSerGlySerLysLysGluAspThrAspArgLysCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGGTATCATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                    915
408
74
100
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-828-332-6 (1-1755) x US-09-817-464-12 (1-915)
                                                                                                                            RESULT 10
US-09-817-464-12
; Sequence 12, Application US/09817464
; Patent No. 6515107
                                                                                                                                                                                                                                                                                                                                                                                                                                                   6.99e-172
2219.00
82.53
69.86
67.18
                                                                                    AACCATGCCATC 1752
                                                                                                        AsnLeuVallie 915
                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT; ORGANISM: Homo sapiens
US-09-817-464-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
Pred. No.:
Score:
                     872
                                                                                                        912
                                                               892
                                                                                    1741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         244
                                           1681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
               셤
                                          à
                                                        .
G
                                                                              ठे
                                                                                                   유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8 &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ⋧
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
```

1080

691

671

960

651

900 631

611

720

551

571 780 591

999

531

9

511

840

1200

731

1260

1320

171

1380

791

1440

Score: 2210.00 Matches: 406 Percent Similarity: 82.53\$ Conservative: 76 Best Local Similarity: 69.53\$ Mismatches: 100 Query Match: 1 Ge.91\$ Indels: 2 DB: 1 Gaps: 2 US-10-828-332-6 (1-1755) x US-08-453-862-2 (1-915) Qy 7 GGGGTATCATCATCATCACGAGGATGACATCAGGGTTCGACCGATACTTCTCC 63 Qy 7 GGGTATCATCATCATCATCATCATCATCATCATCATCATCATC	Qy 64 AGCCGCACGCTGGACAACAACAACAACATCTGGTTTGCCGAGTTCTGGGAGACAAC 123 Db 352 SerArgThrLeuGluAsnArgAsnValTrpPheAlaGluTyrTrpGluGluAsn 371 Qy 124 TTCCATTGCAAGTTGAGCCGCCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC 183 Db 372 PheAnnCysLvsLeuThrleSerGlvGerGyGGAAGTCAACAAGAACAGAACAGTAT 391	184 AACCGAGGCATCGGCCAGGACTCGGCCTATGAGCAGGGGGAAGGTGCAGTTCGTG :::	GGCCGCGTAGGACTCTGCCTCGCATGGACCCCGTGGATGGCACCCAGCTGCTTAAGTAC 3	452 ILEATGRIBY ALABING INCOMENDATION OF THE CONTROL	Qy 541 CCAGGGAGTGGCCAGCTGCGCTCCATCTGCAGTCTGCCCTGCCAGCCCGGGAG 600 bb ::::::: ::: ::: :::	Qy 661 CAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCCACAGAG 720	Oy 781 GTGCTGCTCTTCTGGCGTGGTGGCCATCGCCGCCACGCTGTTCGTGGTGGTCACG 840	Oy 901 CTGCTGGGGGCATCTTTCTGTGCTACGTACCTTCCTCATGATGGCAGAGCGGAC 960
1441 TCACAGTCAGCCGACAAGCTGTACATCCAGACACCACACTGACGGTCTCCGTGAGTCTG 1500 :::	DD 852 ProGluLeuAenValGInLyBArgLyBArgSerPheLyBAlaValValThrAlaAlaThr 871 Qy 1621 ATGTCCAACAAGTTCACAGAAGGGCAACTTCAGGCCCAATGGGGAAGCCAAATCAGG 1680	pProAsnSerProAlaAlaLysLysLysTyrValSs	a m	TITLE OF INVENTION: L-AP4 SENSITIVE GLUTAMATE RECEPTORS NUMBER OF SEQUENCES: 5 CORRESPONDENCE ADDRESS: 5 STREET: Two Embarcadero Center, 8th Floor CITY: San Francisco STATE: CA COUNTRY: USA	ZIP: 9411-3834 COMPUTER READBLE FORM: COMPUTER: IEM PC compatible COMPUTER: IEM PC COMPATION SYSTEM: PC-DOS/MS-DOS COFFWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION NUMBER: US/08/453,862	ი ფო.ჯ.	DOCKET NUMBE 206-467-96 206-467-96 415-576-0306 RACTERISTICS NRACTERISTICS NA acid	; TOPOLOGY: linear ; MOLECULE TYPE: protein ; MOLECULE TYPE: protein ; Molecule TYPE: protein Alignment Scores: Pred. No.:

```
LENGTH: 915 amino acids
                                                                                                                                                                                                                                                 MOLECULE TYPE: protein
                                                                                                                                                                                                                                TYPE: amino acid
                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                         TOPOLOGY:
                                                                                                                                                                                                                                                      ; MOLECULE TY|
US-08-452-734A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                424
                                                                                                                                                                                                                                                                                                                                 Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                   엄
                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                        1440
                                                                                                                                                                                                                                                                                                              1500
                                                                                                                                                                                                                                                                                                                                                                                            1620
                                                                                                                                                   1260
                                                                                                                                                                                                                                                                                                                                                     1560
                                                                                                                                                                                                                                                                                                                                                                                                                                  1680
                                                                                                                                                                                         TCGGACCTGTCCCTCATCTGCCTGGGCTACAGCATGCTGCTGATGGTCACGTGTACT 1320
                                                                                                                                                                                                                               GTGTACGCCATCAAGACCCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGC 1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGTGTGAGAACCTGGAGACCCCAGGGCTGGCTACCAAACAGACCTACGTCACTACACC 1740
                                                                                        711
                                                                                                                               731
                                                                                                                                                                     751
                                                                                                                                                                                                                                                   791
                                                                                                                                                                                                                                                                                           811
                                                                                                                                                                                                                                                                                                                                  831
                                                                                                                                                                                                                                                                                                                                                                        851
                                                                                                                                                                                                                                                                                                                                                                                                             871
                                                                                                                                                                                                                                                                                                                                                                                                                                                     891
                                                                                                                                                                                                             771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    :::|||||||||
ThrAlaProArgLeuIleSerProThrSerGlnLeuAlaIleThrSerBerLeuIleSer
                                                                                                                       AGTGCCCCCCCCTTTCATCACCCCGCCTCCCAGCTGGCCATCACCTTCATCTCTCC
                                                                                                            CTGCAGCTGCTCGGCATCTGCGTGTTCGTGGTGGACCCCTCCCACTCGGTGGTGGTGGAC
                                                                                                                                                   TTCCAGGACCAACGGACACTTGACCCCCCCCCAGGGGGGGCGTGCTCAAGTGCGACATC
                                                                                                                                                                                                   TTCACCATGTACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCCATGTTTTTGGCACC
                                                                                                                                                                                                                                                                                  TCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTGACGGTCTCCGTGAGTCTG
                                                                                                                                                                                                                                                                                                                                                     AGCGCTTCAGTGCTCCTGGGGATGCTCTACATGCCCCAAAGTCTACATCATCCTTCCAC
                                                                                                                                                                                                                                                                                                                                                                                            CCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGACGCCGCCCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Segerson, Thomas P.
APPLICANT: Mulvihil, Elieen R.
APPLICANT: Mulvihil, Elieen R.
APPLICANT: Mulvihil, Elieen R.
APPLICANT: Saugstad, Julie A.
APPLICANT: Westbrock, Gary L.
TITLE OF INVENTION: L-AP4 SENSITIVE GLUTAWATE RECEPTORS NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew LLP STREET: Two Embarcadero Center, 8th Floor CITY: San Francisco
STREET: CA.
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 2, Application US/08452734A Patent No. 5831047 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AACCATGCCATC 1752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   912 AsnLeuValile 915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-452-734A-2
                                                                                                           1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1741
                               1021
                                                                      1081
                                                                                                                                                   1201
                                                                                                                                                                                          1261
                                                                                                                                                                                                                                                                        1381
                                                                                                                                                                                                                                                                                                               1441
                                                                                                                                                                                                                                                                                                                                                     1501
                                                                                                                                                                                                                                                                                                                                                                                            1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1681
            652
                                                 672
                                                                                         692
                                                                                                                               712
                                                                                                                                                                                                              752
                                                                                                                                                                                                                                1321
                                                                                                                                                                                                                                                    772
                                                                                                                                                                                                                                                                                           792
                                                                                                                                                                                                                                                                                                                                                                        832
                                                                                                                                                                                                                                                                                                                                                                                                               852
                                                                                                                                                                                                                                                                                                                                                                                                                                  1621
                                                                                                                                                                                                                                                                                                                                                                                                                                                     872
                                                요
                                                                                   ద
                                                                                                       ò
                                                                                                                           요
                                                                                                                                            ò
                                                                                                                                                                g
                                                                                                                                                                                        8 8 8
                                                                                                                                                                                                                                               ያ
ያ
                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                                                                                                             엄
                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                    SP
OP
                                                                                                                                                                                                                                                                                                                                                                                        ठे
                                                                                                                                                                                                                                                                                                                                                                                                           엄
                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                 요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                               ઠે
                                                                      ð
```

```
244 ATTGACGCTGTGTACGCCATGGGCCACGCGTGCACGCCATGCACCGTGACCTGTGTCCC 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  304 GGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGCACCCAGCTGCTTAAGTAC 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               332 GlyalaileThrileGlnProLysArgAlaThrValGluGlyPheAspAlaTyrPheThr 351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              124 TICCATTGCAAGTIGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     184 AACCGAGAGCGCATCGGCCAGCACTCGGCCTATGAGCAGGAGGGGAAGGTGCAGTTCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GACGCACCGGGCGCTACGACATCTACCAGTACCAACTGCGCAAT---GGCTCGGCCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGGTATCATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             64 AGCCGCACGCTGGACAACAACAGCGCGAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     364 ATCAGGAACGICAACTICTCAGGCATIGCGGGGAACCCTGIAACCTICAAIGAGAACGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TACAAGGTCATCGGCTCGTGGACAGACCACCTGCACAATAGAGCGGATGCAGTGG
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/452,734A
FILING DATE: 30-MAY-1995
CLASSIFICATION NUMBER: US 08/176,401
PILING DATE: 30-DEC-1993
ATTONEY/AGENT INPOMMATION:
NAME: Parmelee, Steven W.
REGISTRATION NUMBER: 31,990
REFERENCE/POCKET NUMBER: 31,990
REGISTRATION NUMBER: 31,990
REFERENCE/POCKET NUMBER: 13952-18-1
TELECOMMULICATION INFORMATION:
TELECOMMULICATION INFORMATION:
TELEFAK: 415-576-0300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       915
406
76
100
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-828-332-6 (1-1755) x US-08-452-734A-2 (1-915)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3.77e-171
2210.00
82.53%
69.52%
66.91%
                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO: 2: SEQUENCE CHARACTERISTICS:
```

391

123 371

63

243

411

431

451 423 471 480

g

ઠે g ઠે g 8 6 ઠે g

8 &

ò ያ ያ

g ઠે g 8 g

셤 ઠે

```
CTGTGTGAGAACCTGGAGCCCCAGCGCTGGCTACCAAACAGACCTACGTCACCTACACC 1740
                                                                              GGGGTATCATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCCGCACGCTGGACAACAACAACAACATCTGGTTTGCCGAGTTCTGGGAGACAAC
                                                                                                                                                                                                                                                          GENERAL INFORMATION:

APPLICANT: Segerson, Thomas P.
APPLICANT: Segerson, Thomas P.
APPLICANT: Mulvihil, Eileen R.
APPLICANT: Mulvihil, Eileen R.
APPLICANT: Saugersad, Julie A.
APPLICANT: Westbrook, Gay L.
TITLE OF INVENTION: L-AP4 SENSITIVE GLUTAMATE RECEPTORS NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
ADDRESSE: Townsend and Townsend and Crew LLP STRET: Two Embarcadero Center, 8th Floor CITY: San Francisco STATE: CA.
COUNTRY: USA
ZIP: GA.
COMPUTER: Thomesond and Townsend and Crew LLP STATE: CA.
COMPUTER: Pandals FORM:
MEDIUM TYPE: Ploppy disk
COMPUTER: IBM PC Compatible
OPERATION SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Batentin Release #1.0, Version #1.25
CURRENT APPLICATION NUMBER: US/08/176,4018
FILING DATE: 30-DECEMBER-1993
CLASSIFICATION: 435-C-0300
INFORMATION NUMBER: 13990
REFERENCE/DOCKET NUMBER: 13990
REFERENCE/DOCKET NUMBER: 13952-18-2
TELECOMMUNICATION INFORMATION:
TELEPAN: 415-576-0300
INFORMATION FOR SEO ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 915 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              915
406
76
100
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-828-332-6 (1-1755) x US-08-176-401B-2 (1-915)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                         Sequence 2, Application US/08176401B Patent No. 6274330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3.77e-171
2210.00
82.53%
69.52%
66.91%
                                                                                                                              1741 AACCATGCCATC 1752
                                                                                                                                                            912 AshLeuValile 915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                             US-08-176-401B-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     , MOLECULE TY1
US-08-176-401B-2
 1621
                                                               1681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
DB:
                       g
                                                               ò
                                                                                     ద
                                                                                                                             ઠે
                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCCC 1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCG 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1081 AGTGCCCCGCGTTTCATCAGCCCGGCCTCGCCATCACCTTCATCCTCATCTCC 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1141 CTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGACCCCTCCCACTCGGTGGTGGAC 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1261 TCGGACCTGTCCCTCATCTGCCTGCTGGCTACAGCATGCTGCTGATGGTCACGTGTACT 1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1321 GTGTACGCCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGC 1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1381 TTCACCATGTACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCATCTTTTTGGCACC 1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1441 TCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTGACGGTCTCCGTGAGGTCTG 1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGGGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCATCCTCTTCCAC 1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1201 TTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGGCGTGCTCAAGTGCGACATC 1260
                                                                                                                                                                                                                                                                                                                                       999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ::||||||||| |||||||| 692 ThralaProArgLeuIleSerProThrSerGInLeuAlaIleThrSerSerLeuIleSer 711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             551
                                                                                                                                             720
                                                                                                                                                                             571
                                                                                                                                                                                                                                           591
                                                                                                                                                                                                                                                                         GIGCIGCCCCTCTTCCIGGCCGTGGTGGCCATCGCCGCCACGCTGTICGTGGTGGTCACG 840
                                                                                                                                                                                                                                                                                                         611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AACCGCACGAGCTGCCAGCCCATCCCCATCGTCAGTTGGAGTGGGACTCGCCGTGGGCC 780
                                   GlyLysGlyValArgGluIleProSerSerValCysThrLeuProCysLysProGlyGln
                                                                                CGAAAGAAGACTGTGAAGGGCATGGCTTGCTGGCACTGCGAGCCCTGCACCGGGTAC
                                                                                                CAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |||||||||
| AsnargThrGlyCysGlnAsnIleProIleIleLysLeuGluTrpHisSsrProTrpAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCAGGAGTGGCCAGCTGCCGCGCTCCATCTGCAGTCTGCCCTGCCCAGCCCGGGGAG
                                                                                                                                                                512
                                                                                109
                                                                                                                                             661
                                                                                                                                                                                                                                                                                                         592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           832
                                                                                                              532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1561
                                                                                                                                                                                                           721
                                                                                                                                                                                                                                                                                                                                        841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1021
                                                                                                                                                                                                                                                                           781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       961
```

123

음 중 음

ઠે g ò

6 8 6 8 6 8 6

791

771

751

1440

811

1500

831

1560

851

1620

1680

911

品 名 品 谷 品

```
AGCGCTTCAGTGCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCATCCTTCCAC
                                                                                                                                                                                                                                                                                                                                                                                              CCGGAGCAGAAACCTGCCCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                 ||||||||||||||::::|
892 LeuCysGluAsnValAspProAsnSerProAlaAlaLysLysLysTyrValSerTyrAsn
GTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCCAAGCCCATCGGC
                                                                                                                                                                                         TTCACCATGTACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCATCTTTTTGGCACC
                                                                                                                                                                                                           CTGTGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACAGACCTACGTCACCTACACC
                                                     TCGGACCTGTCCCTCTGCTGCTGCTACAGCATGCTGCTGATGGTCACGTGTACT
                                                                                                                                        1441 TCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTGACGGTCTCCGTGAGTCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AFLICANII

TITLE OF INVENTION: L.AP4 SENSITIVE GLUTAMATE RECEPTORS

NUMBER OF SEQUENCES: 3
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US94/14989
FILING DATE:
CLASSIFICATION DATA:
APPLICATION NUMBER: US 08/176,401
FILING DATE: 30-DEC-1993
APPLICATION NUMBER: US 08/176,401
FILING DATE: 30-DEC-1993
ATTORNEY/AGENT INFORMATION:
NAME: Parmelee, Steven W.
REGISTRATION NUMBER: 31,990
REFERENCE/DOCKET NUMBER: 31,990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 14
PCT-US94-14989-2
; Sequence 2, Application PC/TUS9414989
; GENERAL INFORMATION:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (415) 543-5043
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1741 AACCATGCCATC 1752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      912 AshLeuValile 915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 915 amino aci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: protein PCT-US94-14989-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                              832
                                                                                                                                                                                                                                                                                                                                                                                                1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   872
                                                                                                                                                                                                                           792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1681
                                                      1261
                                                                                                                                                                                           1381
                                                                                                                                                                                                                                                                                                                                1501
                                                                                                                                                                                                                                                                                                                                                                                                                                 852
                     732
                                                                                                                        1321
                                                                                                                                                                                                                                                                                                                                                                                                                            Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                 엄
                                                                                                                                             a
                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ద
                                            8
                                                                                                             8
                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1201 TTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGCGTGCTCAAGTGCGACATC 1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    671
                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           731
                                                                                                                                                                                                             363
                                                                                                                                                                                                                                                                              423
                                                                                                                                                                                                                                                                                                              471
                                                                                                                                                                                                                                                                                                                                              GACGCACCGGGGGCGCTACGACATCTACCAACTGCGCAAT---GGCTCGGCCGAG 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                   511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              611
                                     391
                                                                                                        411
                                                                                                                                        ATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGCCATGCACCGTGACCTGTGTCCC 303
                                                                                                                                                                           431
                                                                                                                                                                                                                                             451
                                                                                                                                                                                                                                                                                                                                                                                 491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                631
                                                                                                                                                           TTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
                                                                        184 AACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCAGGAGGGGAAGGTGCAGTTCGTG
                                                                                        392 GlyGlnGluArgIleGlyLysAspSerAsnTyrGluGluGlyClyCysValGlnPheVal
                                                                                                                                                                                                           GGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGCACCCCAGCTGCTTAAGTAC
                                                                                                                                                                                                                                                                              ATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAACCTTTGAATGAGAACGGA
                                                                                                                                                                                                                                                                                                  TACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541 CCAGGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCTGCCCTGCCAGCCCGGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGAAAGAACTGTGAAGGGCATGGCTTGCTGGCACTGCGAGCCCTGCACCGGGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      532 ArglyslysthrGlnLysGlyThrProCysCysTrpThrCysGluProCysAspGlyTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCCACAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AACCGCACGAGCTGCCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTGCTGCCCCTCTTCCTGGCCGTGGGCATCGCCGCCACGCTGTTCGTGGTGGTCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGCAGCTGCTCGGCATCTGCGTGGTTCGTGGTGGACCCCTCCCACTCGGTGGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                 472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1021
                                                                                                                                                                                                           304
                                                                                                                                                                                                                                                                                                                                                424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1141
                                                                                                                                          244
                                                                                                                                                                                                                                                                                364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      961
```

8 6 8

8 S

6 B 6 B 6

a

õ

රු පු

8 8 8

a

යු

6 8 6 8 6 8 6

8 8 8

	OY 1501 AGCGCTTCAGTGCCTGGGGATO OY 1561 CGGGAGCAGACACACAGCG OY 1561 CGGGAGCAGACACACAGCG OY 1561 CGGGAGCAGACACACAGCG OY 1561 CGGGAGCAGACACACACAGCG OY 1621 ATGTCCAACAGTTCACACAGACA OY 1621 ATGTCCAACAGTTCACACAGAC OY 1631 ATGTCCAACAGTTCACACAGAC OY 1641 ATGTCCAACAGTTCACACAGAC OY 1641 ATGTCCAACAGTTCACACAGAC OY 1741 AACCATGACAACACTCACAGAC OY 1741 AACCATGACAACACTCAGAGACCCC OY 1741 AACCATGACAACACTCAGAGACCCC OY 1741 AACCATGACAACACTCAGAGACCCC OY 1741 AACCATGACAACACTCAGAGACCCC OY 1741 AACCATGAACACTCAGAGACCCC OY 1741 AACCATGAACACTCAGAGACCCC OY 1741 AACCATGAACACTCAGAGACCCC OY 1741 AACCATGAACACTCAGAGACCCCC OY 1741 AACCATGAACACTCAGAGACCCCC OY 1741 AACCATGAACACTCAGAGACCCCC OY 1741 AACCATGAACACTCAGAGACCCCCC OY 1741 AACCATGAACACTCAGAGACCCCCCCCCAGACACACACAC
Alignment Scores: 2.776-171	452
S B S B S B S B S B S B S B S B S B S B	4 6 4 6 4 6 4 6 4 6 4 6 4 6 4 6 4 6 4 6

```
TGCTGGGCTACAGCATGCTGCTGATGGTCACGTGTACT 1320
                                                                                                                                                                                                                                                                                                       GCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGC 1380
                                                                                                                                                                                                                                                                                                                                                         TTGTCTGGCTGGCCTTCATCCCCATCTTTTTTGGCACC 1440
                                                                                                                                                                                                                                                                                                                                                                                                          ACATCCAGACAACACACACAGACGGTCTCCGTCAGTCTG 1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCAAGCGCAGTCTCAAAGCCGTGATCACGCCGCCCACC 1620
||||||||||||
rgLy8ArgSerPheLy8AlaValValThrAlaAlaThr 871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGCCTCGCAGCCATCACCTTCATCCTCATCTCC 1140
                                                                                                                                                                                                     ACCCCCGCTTTGCCAGGGGGTGCTCAAGTGCGACATC 1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCTCTACATGCCCAAAGTCTACATCATCCTCTTCCAC 1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGCCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAG 1680
GCATCTTCCTAGGCTCGCATGAGCATCAGCTACGCG 102(
||::::|||||||||||||||
.rgValPheLeuGlyLeuGlyMetCysIleSerTyrAla 671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ropic Glutamate Receptor Subtypes (HWR4, nd Related DNA Compounds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /617,785E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P94/02991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SE
```

1020

919

1080

636

1140

959

1200

1260

969

1320

716

1380

736

1440

756

1500

1560

1620

816

1680

```
CTGTGTGAGAACCTGGAG-------ACCCCAGCGCTGGCTACCAAACAGACC 1725
                                             TTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTG
                                                                            :::
ValAlaValCysSerPheArgArgValPheLeuGlyLeuGlyMetCysIleSerTyrAla
                                                                                                                                                                               TTCCAGGACCAACGGACACTTGACCCCCCCCTTTGCCAGGGGCGTGCTCAAGTGCGACATC
                                                                                                                                                                                                                                            1261 TCGGACCTGTCCCTCTGCCTGCTGGCTACAGCATGCTGATGGTCACGTGTACT
                                                                                                                                                                                                                                                                         AGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCATCCTCCTTCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                        CCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                1621 ATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCCAATGGGGAAGCCAAATCAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                             AsnArgThrGlyCysGlnAspIleProIleIleLysLeuGluTrpHisSerProTrpAla
                grecrececertricerescenserescentescencecececererrespenseres
                                                                                                           CTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCG
                                                                                                                                                                      CTGCAGCTGGCATCTGCGTGTGGTTCGTGGTGGACCCTCCCACTCGGTGGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Search completed: June 17, 2005, 18:55:27 Job time: 111 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1726 TACGTCACCTAC 1737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ||||||:::
SerValThrTrp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   837
                                                                                                                                                                                                      1141
                                                                                                                                                                                                                                    1201
                                                                                                                                                                                                                                                                                697
                                                                                                                                                                                                                                                                                                                                                                                           1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1681
                781
                               537
                                               841
                                                              557
                                                                            901
                                                                                           577
                                                                                                            961
                                                                                                                          597
                                                                                                                                          1021
                                                                                                                                                        617
                                                                                                                                                                       1081
                                                                                                                                                                                      637
                                                                                                                                                                                                                                                                                               1321
                                                                                                                                                                                                                                                                                                                              1381
                                                                                                                                                                                                                                                                                                                                                                                                                        1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      817
                                                                                                                                    6 6 6 6 6 6 6 6 6
                                                                                                                                                                                                                                                                                                                                                                       8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                   g &
                           g
                                                          g
                                                                       ठ
                                                                                        g
                                                                                                           ò
                                                                                                                     g
                                                                                                                                                                                                                                                                                                          8 & 8
                                                                                                                                                                                                                                                                                                                                                      ⋧
                                                                                                                                                                                                                                                                                                                                                                                                                    ⋧
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ठे
 8 8
                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                               600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          780
                                                                                                                                                                                                                                                                                                                                     480
                                                                                                                                                                                                                                                                                                                                                                                                                  436
                                                                                                                                                                                                                                                                                                                                                                                                                                                456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          516
                                                                                                                                                                                             296
                                                                                                                                                                                                                                            183
                                                                                                                                                                                                                                                                                         356
                                                                                                                                                                                                                                                                                                        303
                                                                                                                                                                                                                                                                                                                                                                    423
                                                                                                                                                                               63
                                                                                                                                                                                                                                                                                                       GlyLysGlyValArgGluIleProAlaSerValCysThrLeuProCysLysBroGlyGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGTA CCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAG
                                                                                                                                                                               GGGGTATCATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC
                                                                                                                                                                                        AGCCGCACGCTGGACAACAACAAGCGCGCAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC
                                                                                                                                                                                                                                             TTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
                                                                                                                                                                                                                                                     AACCGAGAGCGCATCGGCCAGGACTCGGCCTATGAGCAGGAGGGGGAAGGTGCCTG
                                                                                                                                                                                                                                                                                   ATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAACCTTCAATGAGAACGGA
                                                                                                                                                                                                                                                                                                                                                                           GACGCACCGGGGCGCTACGACATCTACCAGTACCAACTGCGCAATGGCTCG----GCCGAG
                                                                                                                                                                                                                                                                                                                                                                                                         TACAAGGTCATCGCTCGACAGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCAGGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCTGCCCTGCCAGCCCGGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGAAAGAACTGTGAAGGGCATGGCTTGCTGCTGCCACTGCGAGCCCTGCACCGGGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      867
405
73
99
7
                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                US-10-828-332-6 (1-1755) x US-08-617-785-4 (1-867)
EARLIER FILING DATE: 1994-09-07
EARLIER APPLICATION NUMBER: EPO 9416553.7
EARLIER FILING DATE: 1994-08-19
EARLIER PILING DATE: 1994-08-19
EARLIER PILING DATE: 1993-09-20
NUMBER OF SEQ ID NOS: 26
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 4
                                                                                                            1.18e-169
2191.50
81.85%
69.35%
66.35%
                                                                            ORGANISM: Homo sapiens
                                                                                                    Alignment Scores:
Pred. No.:
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                               ; ORGANISM: Hk
US-08-617-785-4
                                                                                                                                                                               7
                                                                                                                                                                                               277
                                                                                                                                                                                                              64
                                                                                                                                                                                                                             297
                                                                                                                                                                                                                                            124
                                                                                                                                                                                                                                                           317
                                                                                                                                                                                                                                                                           184
                                                                                                                                                                                                                                                                                         337
                                                                                                                                                                                                                                                                                                        244
                                                                                                                                                                                                                                                                                                                       357
                                                                                                                                                                                                                                                                                                                                      304
                                                                                                                                                                                                                                                                                                                                                     377
                                                                                                                                                                                                                                                                                                                                                                                   397
                                                                                                                                                                                                                                                                                                                                                                                                                  417
                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          721
                                                                      TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                      364
                                                                                                                                                                                                                                                                                                                                                                                                   424
                                                                                                                                                                                                                                                                                                                                                                                                                                                 437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          497
                                                               LENGTH:
                                                                                                                                                                                           g
                                                                                                                                                                                                             8 6
                                                                                                                                                                                                                                      6 6 6 6 6
                                                                                                                                                                                                                                                                                                                   8 8 8
                                                                                                                                                                                                                                                                                                                                                               8 6 8 6
                                                                                                                                                                                                                                                                                                                                                                                                                             8 B 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ठे वि ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                               ò
```

This Page Blank (uspto)

```
Rat metab
Rat metab
                                   met
bum
GPC
met
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        met
                                                                                                          Human Human
                                                                                                                                                                               Human
Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human
                                                      Human
Human
                                                                                                                                                                                                                                      Human
Human
Human
                                                                                                                                                                                                                                                                                                             Human
                                                                                                                                                                                                                                                                                                                                            Novel
Mouse
                                                                                                                                                                                                                                                                                                                                                                                Human
Novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human
Human
                                                                                       Human
                                                                                                                                            Нишап
                                                                                                                                                                                                                   Human
                                                                                                                                                                                                                                                                                          Human
                                                                                                                                                                                                                                                                                                                                                                                                                                        Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel glutamic acid receptor protein and encoded DNA, applicable in screening agonists or antagonists of glutamic acid or allosteric modulator for use as drugs in ameliorating symptoms and diseases e.g.
                                                                                                                                                                Human
                                                                                                                                                                                                                                                                                                                                                                                                                    Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rat; anorectic; antiulcer; antidiabetic; laxative; antidiarrheic; glutamic acid receptor; receptor; gastrointestinal tract disorder; sitieirgia; obesity; ulcer; diabetes; constipation; diarrhoea.
Ade58166
Add89119
Add89119
Adx189219
Adx18623
Adx186623
Adx18667
Adx110452
Adx11043
Adx11043
Adx11043
Adx11043
Adx11043
Adx11043
Adx11043
Adx1104
Adx110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Torii K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ή,
                                 ADQ89114
AAR72092
AAR72092
AAR72092
AAR72092
ABM84666
ABM84666
ABR6248
ABR6248
ABR6248
ABR6249
AD029476
ABR6249
AD029476
ABR6249
ABR6249
ABR6249
ABR6249
ABR62491
ABR62491
ABR62491
ABR62491
ABR62491
ABR62491
ABR626155
ABR626155
ABR626165
ABR626165
ABR626101
ABR626165
ABR666165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAE30199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Uneyama
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABR56244 standard; protein; 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-OCT-2002; 2002WO-JP010984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23-OCT-2001; 2001JP-00325159.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rat glutamic acid receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (AJIN ) AJINOMOTO CO INC
 Maekawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2003-430418/40.
N-PSDB; ACC70676.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO2003035873-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   San Gabriel A,
                                                                                                                                                                                                                                                                                                                                            71.70.70.70.67.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAY-2003.
RESULT 1
ABR56244
   Command line parameters:
-MODEL=Frame+ n2p, model - DEV=xlp
-Q=/cgn1_1/USFTO_spool_p/US10828332/runat_17062005_171335_24935/app_query.fasta_1.1927 .
-Q=/cgn1_1/USFTO_spool_p/US10828332/runat_17062005_171335_24935/app_query.fasta_1.1927 .
-DB=A_Geneseq_OFWT=Fastan - SUFFIX=rag - MINMATCH=0.1 - LOOPGL=0 - LOOPEXT=0
-UNITS=bits - START=1 - END=-1 - MATRIX=blosum62 - TRANS=human40. cdi - LIST=45
-DOCALIGN=200 - THR SCORE=pct - THR MAX=100 - THR MIN=0 - ALIGN=15 - MODE=LOCAL
-OUTFWT=pto - NORM==xt - HEAPSIZE=500 - MINLEN - MAXLEN=2000000000
-USER=US10828332_@CGN 1 1 272_@runat_17062005_171335_24935 - NCPU=6 - ICPU=3
-UN WAAD - LANGEGGUERY - MEG SCORES=0 - MAHIT - DSPBLOCK=100 - LONGLOG
-DBV_TIMEOUT=120 - WARN TIMEOUT=30 - THRRADS=1 - XGAPOP=10 - XGAPEXT=0.5 - FGAPOP=6
-FGAPEXT=7 - YGAPOP=10 - YGAPEXT=0.5 - DELOP=6 - DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human met
Human met
Human Pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rat gluta
Rat metab
Rat Prote
Rat Prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human ph8
Human mGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mouse nov
                                                                                                                         June 17, 2005, 18:18:26; Search time 254 Seconds (without alignments) 5344.602 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                  atgccaggggtatcatc......acaccaaccatgccatctag 1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Abr56244 F
Abg74133 F
Ade58164 F
Ade29095 N
Aao15101 F
Aar82658 F
                                                                                                                                                                                                                                                                                                                                                                                                                     4211384
                  GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                         - protein search, using frame_plus_n2p model
                                                                                                                                                                                                                                                                                                                                                                                                                  Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                  2105692 segs, 386760381 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABG74133
ADE58164
ADE58168
ADO29095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAC15101
AAR82658
AAE23757
ABP81846
ADE58170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABR56244
                                                                                                                                                                                                                                                                                        , Ygapext
, Ygapext
, Fgapext
, Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          geneseqp2002s:*
geneseqp2003as:*
geneseqp2003bs:*
geneseqp2004s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Minimum Match 0%
Maximum Match 100%
Listing first 45 su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         geneseqp1990s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        geneseqp2000s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Geneseq_16Dec04:*
geneseqp1980s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                   length: 0
length: 2000000000
                                                                                                                                                                                              US-10-828-332-6
3303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               80
                                                                                                                                                                                                                                                                    BLOSUM62
Xgapop 10.0 , X
Ygapop 10.0 , Y
Fgapop 6.0 , F
Delop 6.0 , D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     912
909
912
912
912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum DB seq
Maximum DB seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3107
3050.5
3050.5
3050.5
3017
3004.5
3004.5
3004.5
                                                                                                                                                                                                                 Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score
                                                                                                                                                                                                                                                                       Scoring table:
                                                                                         OM nucleic
                                                                                                                                                                                                                                      Sequence:
                                                                                                                                                                                                                                                                                                                                                                                  Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Database
                                                                                                                             ទូ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                             Run
```

~

240

840 280 900 300 1020

320

1080

360

1140

1200

400

380

1260

420

1320

1380

460

440

1440

480

1500

500

1560

520

1620

540

1680

560

```
CTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTGGACCCCTCCCACTCGGTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PheThrMetTyrThrThrCysIleValTrpLeuAlaPheIleProllePhePheGlyThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GlnTyrGlnValAspArgTyrThrCysLysThrCysProTyrAspMetArgProThrGlu
                  AACCGCACGAGCTGCCAGCCCATCCTCAAGTTGGAGTGGGACTCGCCGTGGGCC
                                                          GIGCTGCCCCTCTTCCTGGCCGTGGCGCATCGCCGCCACGCTGTTCGTGGTGGTCACG
                                                                      ValLeuProLeuPheLeuAlaValValGlyIleAlaAlaThrLeuPheValValValThr
                                                                                                 TTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTG
                                                                                                                                         CTGCTGGCGGGCATGTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGAC
                                                                                                                                                                                 CTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCG
                                                                                                                                                                                                                        AGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATCACCTTCATCCTCATCTCC
                                                                                                                                                                                                                                                                                                                 LeuGlnLeuLeuGlyIleCysValTrpPheValValAspProSerHisSerValValAsp
                                                                                                                                                                                                                                                                                                                                             TTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGGCGTGCTCAAGTGCGACATC
                                                                                                                                                                                                                                                                                                                                                        PheGlnAspGlnArgThrLeuAspProArgPheAlaArgGlyValLeuLysCysAspIle
                                                                                                                                                                                                                                                                                                                                                                                   TCGGACCTGTCCCTCATCTGCCTGCTGGGCTACAGCATGCTGCTGGTGGCGCGTGTACT
                                                                                                                                                                                                                                                                                                                                                                                                                           GTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                     TTCACCATGTACACCACCTGCATTGTCTGGCTTGGCCTTCATCCCCCATCTTTTTGGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTGACGGTCTCCGTGAGTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCATCTTCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AsnHisAlaIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AACCATGCCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     461
                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                     1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                441
                                                                                                                     281
                                                                                                                                                                                                                                                                                                      1141
                                                                                                                                                                                                                                                                                                                                              1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1741
                                                                                                                                                                                                     321
                                                                                                                                                                                                                                                               1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1681
                   721
                                      241
                                                           781
                                                                               261
                                                                                                  841
                                                                                                                                         901
                                                                                                                                                                                 196
                                                                                                                                                                                                                         1021
                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                          381
                                                                                                                                                                                                                                                                                                                                                                  401
                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                            1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 581
                                                                                                                                                                                                                8 G
                                                                                                                                                                                                                                                         8 8 8
                                                                                                                                                                                                                                                                                                                  8 8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                  8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                           8 6 8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               දු පු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                 음 장
                                                                         셤
                                                                                                                 g
                                                                                                                                                        셤
                                                                                                                                                                          ò
                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           පු ද
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
            8
                                                                                            õ
                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                        100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     220
                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         720
                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                        180
                                     The present sequence is the protein sequence for rat glutamic acid receptor. The receptor has a transmembrane domain and an intracellular domain common to type 4 metabotropic glutamic acid receptor protein, and an extracellular domain shorter by 316 or 327 amino acid residues than type 4 metabotropic glutamic acid receptor protein. The receptor and to coding sequence are useful in screening agonists or antagonists of glutamic acid or alloseric modulator for use as drugs in ameliorating symptoms and diseases due to abnormal metabolism in gastrointestinal tract including small and large incestines e.g. stitisirgia, obesity, ulcer, diabetes, constipation and diarxhoea
                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                    40
                                                                                                                                                                                                                                                                                                                                                                                                                  80
                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ThrasnargGluargIleGlyGlnaspSeralaTyrGluGlnGluGlyLysValGlnPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ValileAspAlaValTyrAlaMetGlyHisAlaLeuHisAlaMetHisAzgAspLeuCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGCCAGGGGTATCATCATCTTTGCCAACGAGGATGACATCAGGGTTCGACCGATACTTC
                                                                                                                                                                                                                                                                                   TCCAGCCGCACGCTGGACAACAACAGCCGCAACATCTGGTTTGCCGAGTTCTGGGAGGAC
                                                                                                                                                                                                                                                                                                                           AACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGC
                                                                                                                                                                                                                                                                                                                                                                   ACCAACCGAGAGGGCATCGGGCAGGACTCGGCCTATGAGCAGGAGGGGAAGGTGCAGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                      GTGATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGCCATGCACCGTGACCTGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCGGCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGCACCCAGCTGCTTAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAAQCTTCAATGAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCAGGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCTGCCCTGCCAGCCCGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ProdlySerGlyGlnGlnLeuProArgSerlleCysSerLeuProCysGlnProdlyGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAG
                                                                                                                                                                                  584
000
000
                                                                                                                                                                                Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                       (1-584)
                    Claim 3; Page 33-35; 39pp; Japanese
                                                                                                                                                                                                                                                       US-10-828-332-6 (1-1755) x ABR56244
                                                                                                                                                                                 9.04e-217
3107.00
100.00%
100.00%
94.07%
                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
                                                                                                                                                    Ä
                                                                                                                                                    Sequence 584
                                                                                                                                                                        ignment Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 101
                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                        81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                     21
                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                           41
                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         199
                                                                                                                                                                                                                         Query Match:
DB:
                                                                                                                                                                      Alignm
Pred.
Score:
  ò
                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                     음 장
                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                      8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8 6 8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ద
                                                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
```

101

183

124 TTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC

184 AACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCAGGAGGGGAAGGTGCAGTTCGTG

22 GlyAlaValThrIleLeuProLysArgMetSerValArgGlyPheAspArgTyrPheSer

81

303

363

GGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGCACCCCAGCTGCTTAAGTAC

304

364

GACGCACCGGGGCGCTACGACATCTACCAGTACCAACTGCGCAATGGCTCGGCCGAGTAC

424

182

544

484

AAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGGCCA

GGGAGTGGCCAGCAGCTGCCGCGCTCCCATCTGCAGTCTGCCCTGCCAGCCCGGGGAGCGA

244

ATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGCCATGCACCGTGACCTGTGTCCC 423

483 181 543 201 603

161

us-10-828-332-6.rag

```
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
             ઠ
                                       g
                                                              ઠે
                                                                                                                               ઠે
                                                                                                                                                       ద
                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                 용
                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to a rat metabotropic glutamate taste receptor having a molecular weight of 68 kDa, mGluR4, appearing as ABG74133. Also included are an isolated mRNA molecule encoding mGluR4 appearing as ABX16097, a MAX1607 (art sequence) and the human homologue appearing as ABX16097, a mammalian cell transfected with cDNA encoding mGluR4 (the cDNA expressed continue mammalian cell is capable of being translated into immunologically recognisable metabotropic glutamate taste receptors) and screening samples for umam immicking compounds (comprising: (a) transfecting samples for umam immicking compounds (comprising: (a) transfecting caste receptor; (b) culturing the transfected cells in an environment that promotes expression of immunologically recognisable metabotropic glutamate taste receptors; (c) treating the transfected cells with a compound that induces cAMP production; (d) incubating the cells with a compound that induces cAMP production; (e) incubating the amount of camp produced; and (f) correlating suppression of cAMP production with unam infinitiving compound binding to the metabotropic glutamate taste receptors; (c) treating suppression of cAMP production with configuration compound that induces cannot be configurated as a unami taste receptor; and responds to monosodium L-glutamate binding by decreasing cellular level of cAMP. The cell is useful for screening for umami mimicking compounds.

The mGlukA is useful for screening for umami mimics. The present sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel metabotropic glutamate taste receptor which functions as a umami
taste receptor, useful for screening for umami mimicking compounds.
                                                                                                                                                 taste; receptor;
                                                                                                                                              Rat; metabotropic glutamate receptor; mGluR4; umami; tounami mimicking compound; monosodium L-glutamate; cAMP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             604
22
22
11
11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                  Rat metabotropic glutamate receptor mGluR4
                           ABG74133 standard; protein; 604 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     represents the rat mGluR4 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; Page 7; 23pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.15e-212
3050.50
98.97%
98.63%
                                                                                                                                                                                                                                                                              30-MAR-2001; 2001US-00820809.
                                                                                                                                                                                                                                                                                                           31-MAR-2000; 2000US-0193454P.
                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                       Chaudhari N, Roper SD;
                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2003-182515/18.
N-PSDB; ABX16077.
                                                                                                                                                                                                                                                                                                                                         (UYMI-) UNIV MIAMI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  604 AA;
                                                                                                                                                                                                                      US2002151052-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
Pred. No.:
                                                                                     03-APR-2003
                                                                                                                                                                                                                                                 17-OCT-2002
                                                        ABG74133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                          Rattus
RESULT
```

> US-10-828-332-6 (1-1755) x ABG74133 (1-604)

63

ઠે

Percent Similarity: Best Local Similarity:

Query Match:

```
1383
                                                                                                                                           1443
                                                                                                                                                                              1503
                                                                                                                                                                                                                  1563
                                                                                                                                                                                                                                                     1623
                                                                                                                                                                                                                                                                                        1683
                                                                     1264 GACCTGTCCCTCATCTGCCTGCTGGGCTACAGCATGCTGCTGATGGTCACGTGTACTGTG 1323
                                                                                                                                                                                                                                                                                                                          1684 TGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACAGACCTACGTCACCTACACCAAC 1743
               421
                                                   441
                                                                                                                         481
                                                                                                                                                            501
                                                                                      461
                                                                                                                                                                                               521
                                                                                                                                                                                                                                                                      561
                                                                                                                                                                                                                                                                                                         581
                                                                                                                                                                                                                                                                                                                                    Rat; pain; neuronal tissue; gene therapy, spinal segmental nerve injury; chronic constriction injury; CCI; spared nerve injury; SNI; Chung.
                                                                                                                                          402 GlnLeuLeuGlylleCysValTrpPheValValAspProSerHisSerValValAspPhe
                                           CAGTCAGCCGACAAGCTGTACATCCAGACCACACTGACGGTCTCCGTGAGTCTGAGC
                                                                                                                                                                                        GCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCCTCCTTCCACCCG
                                                                                                                                                                                                                           1324 TACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGCTTC
                                                                                                                                                                                                                                                     GAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACGCCGCCACCATG
                                                                                                                                                                                                                                                                                         1624 TCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                     ż
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rat Protein P31423, SEQ ID NO 4035.
                                                                                                                                                                                                                                                                                                                                                                                                                   ADES8164 standard; protein; 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14-AUG-2001; 2001US-0312147P.
01-NOV-2001; 2001US-0346382P.
26-NOV-2001; 2001US-0333347P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14-AUG-2002; 2002WO-US025765
                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-JAN-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GEN HOSPITAL CORP. BAYER AG.
                                                                                                                                                                                                                                                                                                                                                              1744 CATGCCATC 1752
                                                                                                                                                                                                                                                                                                                                                                        Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO2003016475-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27-FEB-2003
                                  1204
                                                                                                                                                                              1444
                                                                                                                                                                                                                  1504
                                                                                                                                                                                                                                                      1564
                                                                                                                                                                                                                                                                                                                                                                                                                                     ADE58164;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (GEHO ) (FARB )
                                                                                                                                                                                                                                                                                                                                                                                                          ADE58164
                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                            g
                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                  요
                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                               8
               셤
                                                  g
                                                                                   g
                                                                                                                     g
                                                                                                                                           ઠે
                                                                                                                                                                              8
                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                          ò
ò
                                 ò
                                                                   δ
                                                                                                       ò
```

```
The invention discloses a composition comprising two or more isolated rat or human polynucleotides or a polynucleotide which represents a fragment, derivative or allelic variation of the nucleic acid sequence. Also claimed are a vector comprising the novel polynucleotide, a host cell comprising the vector, a method for identifying a nucleotide sequence which is differentially regulated in an animal subjected to pain and a chart increases or decreases the expression of the polynucleotide sequence that is differentially expressed in neuronal tissue of a first animal subjected to pain, a method for identifying a compound which regulates the expression of a polynucleotide sequence which is differentially a compound that regulates the activity of one or more of the compound that regulates the activity of one or more of the composition, a method for producing a pharmaceutical composition, a compound that regulates the activity of one or more of the regulates the activity in an animal of one or more of the polypeptides given in the specification, a method for identifying a compound useful in treating compointed for identifying a compound useful in treating spain and a pharmaceutical composition comprising the one or more polypeptides or their antibodies. The polymucleotide or the compound that colypeptides or their antibodies. The polymucleotide or the compound that colypeptides or their antibodies. The polymucleotide or the compound that colypeptides or their antibodies. The polymucleotide or the compound cinjury (CCI) and spared nerve injury (SNI) in an animal (e.g. spinal segmented nerve injury (SNI) in an animal (e.g. spinal segmence presented is a rat protein (shown in Table 2 of the specification) which is differentially expressed during patent did not form part of the printed specification, but was obtained in electronic form directly from WIPO at the specification, but was obtained in electronic form directly from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  303
                                                                                             New composition comprising two or more isolated polypeptides, useful for preparing a medicament for treating pain in an animal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCCGCACGCTGGACAACAACAGGCGCAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          124 TICCATIGCAAGTIGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     184 AACCGAGAGCGCATCGGCCAGGACTCGGCCTATGAGCAGGAGGGGAAGGTGCAGTTCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7 GGGGTATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        912
575
2
5
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
Costigan M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-828-332-6 (1-1755) x ADE58164 (1-912)
  Befort K,
                                                                                                                                                        Claim 1; Page; 1017pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.29e-212
3050.50
98.97%
98.63%
92.36%
D'urso D,
                                      WPI; 2003-268312/26.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 912 AA;
                                                          GENBANK; P31423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              390
  ပဲ
  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
```

GGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGCACCCCAGCTGCTTAAGTAC 363

304

ò g

1683

g

ઠે

g

ઠે

셤

δ

g

ઠે

ద

ઠે

පු

ઠે

셤

ઠે

원

ò

ద

ઠે 8 S

ઠે

g

ઠે 요 ઠે

g

ò a ò 8

셤

ઠે

용

ઠે

ઠે

```
The invention discloses a composition comprising two or more isolated rat or human polymucleotides or a polymucleotide which represents a fragment, derivative or allelic variation of the nucleic acid sequence. Also claimed are a vector comprising the novel polymucleotide, a host cell comprising the vector, a method for identifying a nucleotide sequence which is differentially regulated in an animal subjected to pain and a kit to perform the method, an array, a method for identifying an agent that increases or decreases the expression of the polymucleotide sequence that is differentially expressed in neuronal tissue of a first animal subjected to pain, a method for identifying a compound which regulates the expression of a polymucleotide sequence which is differentially
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rat; pain; neuronal tissue; gene therapy; spinal segmental nerve injury; chronic constriction injury; CCI; spared nerve injury; SNI; Chung.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           for
                                                                              TGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACAGACCTACGTCACCTACACCAAC
                                                                                                                                                                                                                                               1624 TCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAGCTG
                                                                                                                                                                                                                                                                    GAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCACCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New composition comprising two or more isolated polypeptides, useful preparing a medicament for treating pain in an animal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Costigan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ė
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rat Protein P31423, SEQ ID NO 4039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADE58168 standard; protein; 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1; Page; 1017pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Befort K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14-AUG-2001; 2001US-0312147P.
01-NOV-2001; 2001US-0346382P.
26-NOV-2001; 2001US-0333347P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14-AUG-2002; 2002WO-US025765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (GEHO ) GEN HOSPITAL CORP.
(FARB ) BAYER AG.
                                                                                                                                                                                                                                                                                                                                                                                                            1744 CATGCCATC 1752
                                                                                                                                                                                                                                                                                                                                                                                                                                         910 HisAlaile 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Woolf C, D'urso D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2003-268312/26.
GENBANK; P31423.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO2003016475-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27-FEB-2003
  1444 (
                                                                                  1504
                                                                                                                                                              1564
                                                                                                                                                                                                                                                                                                                             1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADE58168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADES8168

ADES8168

AC ADES

A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                 셤
                                                                                                                요
                                                                                  ઠે
                                                                                                                                                              ò
                                                                                                                                                                                                  g
                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACCTGTCCCTCATCTGCCTGGGGCTACAGCATGCTGCTGATGGTCACGTGTACTGTG 1323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGACCCCTCCCCACTCGGTGGTGGACTTC 1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGCTTC 1383
                                                           469
                                                                                                   483
                                                                                                                                           489
                                                                                                                                                                                    543
                                                                                                                                                                                                                          509
                                                                                                                                                                                                                                                                                                                                                663
                                                                                                                                                                                                                                                                                                                                                                                       549
                                                                                                                                                                                                                                                                                                                                                                                                                                 723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   729
                                                                                                                                                                                                                                                                  603
                                                                                                                                                                                                                                                                                                        529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GlySerGlyGlnGlnLeuProArgSerIleCysSerLeuProCysGlnProGlyGluArg
                                                                                                                                                                                                                                                                                                                                                                   ValargTyrAsnAspThrProlleValLysAlaSerGlyArgGluLeuSerTyrValLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LeualaGly1lePheLeuCysTyralaThrThrPheLeuMet1leAlaGluProAspLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCCCCCCCTTTCATCAGCCCGGCCTCGCAGCTGGCCATCACCTTCATCCTCATCTCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGGGCGTGCTCAAGTGCGACATCTCG
                                        AAGGTCATCGGCTCGTGGACAGACCCCTCCACACTAGAATAGAGCGGATGCAGTGGCCA
                                                                                                                                                                                                                                                                GGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCTGCCCTGCCAGCCCAGCCGAGCGA
                                                                                                                                                                                                                                                                                                                                                AAGAAGACTGTGAAGGGCATGGCTTGCTGGCACTGCGAGCCCTGCACCGGGTACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACGCACCGGGGCGCTACGACATCTACCAGTACCAACTGCGCAATGGCTCGGCCGAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GInLeuLeuGlyIleCysValTrpPheValValAspProSerHisSerValValAspPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1384
                                                         450
                                                                                                 424
                                                                                                                                       470
                                                                                                                                                                               484
                                                                                                                                                                                                                        90
                                                                                                                                                                                                                                                                544
                                                                                                                                                                                                                                                                                                      510
                                                                                                                                                                                                                                                                                                                                                                                       530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1324
                                                                                                                                                                                                                                                                                                                                              604
                                                                                                                                                                                                                                                                                                                                                                                                                               664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             964
```

expressed in an animal subjected to pain, a method for identifying a compound that regulates the activity of one or more of the publication, a method for producing a pharmaceutical composition, a method for producing a pharmaceutical composition, a method for identifying a compound or small molecule that regulates the activity in an animal of one or more of the polypeptides given in the specification, a method for identifying a compound useful in treating pain and a pharmaceutical composition comprising the one or more polypeptides or their antibodies. The polynucleotide or the compound that modulates its activity is useful for preparing a medicament for treating modulates its activity is useful for preparing a medicament for treating capinal segmental nerve injury (CLI) and spared nerve injury (SNI) in an animal (e.g. gene therapy). The sequence presented is a rat protein (shown in Table 2 of the sequence data for this patent did not form part of the printed specification, but was obtained in electronic form directly from WIPO at Etp.wipo.int/pub/published_pot_sequences. 543 363 489 389 243 409 303 429 449 423 469 483 369 183 GGCCGCGTAGACTCTGCCCTCGCATGACCCCGTGGATGGCACCCAGCTGCTTAAGTAC GlyArgValGlyLeuCy8ProArgMetAspProValAspGlyThrGlnLeuLeuLvsTyr GGGGTATCATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC AGCCGCACGCTGGACAACAACAGCGCAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC TTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC AACCGAGAGCGCATCGGCCAGGACTCGGCCTATGAGCAGGAGGGGAAGGTGCAGTTCGTG 244 ATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGCCATGCACCTGTGTCCC ATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAAACCTTCAATGAGAACGGA GACGCACCGGGGCGCTACGACATCTACCAGTACCAACTGCGCAATGGCTCGGCCGAGTAC AAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGGCCCA 912 575 2 5 1 Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps: (1-912)US-10-828-332-6 (1-1755) x ADE58168 1.29e-212 3050.50 98.97% 98.63% 92.36% Score:
Percent Similarity;
Best Local Similarity;
Query Match:
DB: Sequence 912 AA; Alignment Scores: 5 64 124 184 390 304 430 364 424 484 8888888888888888888 ઠે a ò 6 6 6 6 6 8 6 6 8 ያ ያ g 8 6 8 6

1023 1083 1143 1203 1263 1323 1383 1443 1503 1563 1683 1743 569 783 589 843 609 903 629 963 649 699 689 709 729 749 769 789 809 849 869 GCTTCAGIGICCCCTGCGGAIGCTCTACAIGCCCAAAGTCTACAICAICCTCCTTCCACCG GACCTGTCCCTCATCTGCCTGCTGGCTACAGCATGCTGCTGATGGTCACGTGTACTGTG GAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCATG GluGlnAsnValProLysArgLysArgSerLeuLysAlaValValThrAlaAlaThrMet TCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAGCTG SerAsnLygPheThrGlnLygGlyAsnPheArgProAsnGlyGluAlaLygSerGluLeu TyrGlnValaspArgTyrThrCysLysThrCysProTyrAspMetArgProThrGluAsn CGCACGAGCTGCCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGGCCCGTG CTGCCCCTCTTCCTGGCCGTGGTGGCATCGCCGCCACGCTGTTCGTGGTGGTCACGTTT GTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGGAACTGAGCTACGTGCTG GGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCGGCC GCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATCACCTTCATCTCATCTCCCTG CAGCTGCTCGCATCTGCGTTCGTGGTGGACCCCTCCCACTCGGTGGACTTC CAGGACCAACGGACACTTGACCCCCCGCTTTGCCAGGGGCGTGCTCAAGTGCGACATCTCG 730 GlnAspGlnArgThrLeuAspProArgPheAlaArgGlyValLeuLysCysAspIleSer 810 830 1624 870 1264 1444 850 1684 890 1024 1144 1204 1504 1564 550 724 570 784 590 844 904 630 964 1084 710 යි පි ď g 셤 8 8 g 8 දු පු 8 8 8 g 8 8 8 셤 ઠે ઠે 셤 ò ઠે ઠે g 셤 ద 8 8 ò g 8 ò ò Š

1744 CATGCCATC 1752

549

509 603

GlySerGlyGlnGlnLeuProArgSerIleCysSerLeuProCysGlnProGlyGluArg

GGGAGTGGCCAGCAGCTGCCGCGCTCCCATCTGCAGTCTGCCCTGCCAGCCGAGCGA

544 510 604

AAGAAGACTGTGAAGGGCATGGCTTGCTGCTGCCACTGCGAGCCCTGCACCGGGTACCAG

ઠે

ADO29095 standard; protein; 909 AA.

29-JUL-2004 (first entry)

Mouse novel GPCR GRM4, SEQ ID NO:194

transgenic mouse; neurological disorder; adrenal gland disorder;

transgenic mouse; neurological disorder; adrenal gland disorder;

colon disorder; intestinal disorder; cardiovascular disorder;

w colon disorder; blood disorder; lamune disorder; bone disorder;

joint disorder; metabolic disorder; nutritive disorder; cancer;

kidney disorder; niver disorder; lung disorder; breast disorder;

w vary disorder; stomach disorder; prostate disorder; sestis disorder;

skin disorder; stomach disorder; pancress disorder; sells disorder;

thymus disorder; thyroid disorder; antiparkinsonian; antimanic;

cytoscatic, antimilammatory; wasotropic; antidaginal; antiarrhythmic;

(NS; central nervous system; respiratory; antidiarrhoeic; antidiabetic;

w virucide; hepatotropic; antibacterial; antianaemic; antidabetic;

w immunosuppressive; nephrotropic; gene therapy; GPCR modulator; mouse; murine; receptor

Mus musculus

WO20040400000-A2.

13-MAY-2004

09-SEP-2003; 2003WO-US028226

09-SEP-2002; 2002US-0409303P.

(PRIM-) PRIMAL INC

Li F; Zeng H; Hohmann J, JE, Gragerov A, Hohmann J, Pavlova MN, Vassilatis D, Gaitanaris GA, Bergmann JE, Madisen L, Mcilwain KL, Pav

WPI; 2004-390329/36. N-PSDB; ADO29096. Novel mammalian G protein coupled receptors, useful for identifying compounds that modulates diagnosing and treating disease condition associated with GPCR dysfunction e.g. autoimmune diseases, angina pectoris, Parkinson's disease.

Claim 1; SEQ ID NO 194; 542pp; English.

The invention relates to human and mouse G protein-coupled receptors (GPCRs) and nucleic acids encoding them. The invention also relates to sequences at least 90% identical to the GPCR proteins and nucleic acids of the invention; methods of treating, preventing or diagnosing diseases associated with GPCRs of the invention; methods of screening for compounds useful in the treatment of GPCR-related diseases, a transgenic mouse comprising a GPCR gene of the invention; a mouse comprising a GPCR transgene or in an endogenous GPCR gene; cells derived from the trasngenic mite; kits comprising serveral mice, each of which has a mutation in a different GPCR gene of the invention; and kits comprising probes which hybridise to GPCR polymucleotides of the invention. The probes which hybridise to GPCR polymucleotides of the invention. The comprising a GPCR nucleic acid. The GPCR nucleic acids and proteins may be used in the diagnosis, treatment or prevention of a wide variety of diseases including neurological disorders (e.g., Altheimer's disease.) disease.

C depression, diabetic neuropathy, Parkinson's disease or schizophrenia); disorders of the adrenal gland; disorders of the colon or intestine (e.g., Crohn's disease, diarrhoea, food poisoning or irritable bowel

999

TACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAGAAC 723

547

AAGAAGACTGTGAAGGGCATGGCTTGCTGCTGCCACTGCGAGCCCTGCACCGGGTACCAG

603 526 663 546

508

604 527 664

544

ò 셤 ઠે g 8 셤

GGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCTGCCCTGCCAGCCCAGCCGGGGGGAGCGA

syndrome); cardiovascular disorders (e.g., angina, cardiac arrhythmia or myocardial infarction); muscular disorders; blood disorders (e.g., anamemia or leukaemia); immune disorders (e.g., autoimmune disorders or AIDS); bone and joint disorders (e.g., osteoarthritis, rheumatoid arthritis, gout or osteoporosis); metabolic or nutritive disorders (e.g., obesity, enzyme deficiency-related diseases or vitamin deficiency-related diseases); and disorders of the kidney, liver, lung, breast, ovary, uterus, prostate, testis, skin, stomach, pancreas, spleen, thymus and thyroid (e.g., cancers). The present sequence represents a GPCR of the invention. Note: The full sequence data for this patent did not form part of the printed specification; those sequences not shown were obtained in electronic format directly from WIPO at [tp.wipo.int/pub/published_pct_sequences. 487 347 TTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC 183 387 243 407 244 ATTGACGCTGTGTACGCCATGGGCCACGCGTGCACGCCATGCACGTGACCTGTGTCCC 303 427 363 447 423 467 483 543 507 AGCCGCACGCTGGACAACAACAGCGCCAACATCTGGTTTTGCCGAGTTCTGGGAGACAAC AACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCAGGAGAGGGGAAAGGTGCAGTTCGTG GGCCGCGTAGGACTCTGCCCTCGCATGGACCCCCGTGGATGGCACCCCAGCTGCTTAAGTAC ATCAGGAACGTCAACTTCTCAGGCATTGCGGGGGAACCCTGTAACCTTCAATGAGAACGGA GGGGTATCATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC GACGCACCGGGGCGCTACGACATCTACCAGTACCAACTGCGCAATGGCTCGGCCGAGTAC Length: Matches: Conservative: Mismatches: Indels: Gaps: US-10-828-332-6 (1-1755) x ADO29095 (1-909). 3.47e-210 3017.00 98.28 97.77 91.34 Best Local Similarity: Sequence 909 AA; Percent Similarity: Alignment Scores: 328 368 64 348 124 184 388 408 304 428 364 448 468 488 424 484 Query Match: DB: 888888888888888888888888 ઠે 셤 ò a ઠે g ઠે 셤 ò 셤 ò 셤 à 셤 ò a ò 셤

원 ò 음 장

g

8 8 8

```
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                   1143
                                                                                                                                                                                                                                                                                                                                                                                                                                 1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1743
                                                                                                                                                      1023
                                                                                                                                                                                            1083
                                                                                                                                                                                                                                                                         1203
                                                                                                                                                                                                                                                                                                                1263
                                                                                                                                                                                                                                                                                                                                                     1323
                                                                                                                                                                                                                                                                                                                                                                                           1383
                                                                                                                                                                                                                                                                                                                                 746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 846
                                                                                                                                                                                                                                                                                           726
                                                                                                                                                                                                                                                                                                                                                                                                                                                    806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   906
                586
                                                                                             626
                                                                                                                 963
                                                                                                                                    646
                                                                                                                                                                         999
                                                                                                                                                                                                               989
                                                                                                                                                                                                                                                    706
                                                                                                                                                                                                                                                                                                                                                                        766
                                                                                                                                                                                                                                                                                                                                                                                                              786
                                    843
                                                                          903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .564 GAGCAGAACGTGCCCAAGCGCAAGCGCACTCAAAGCCGTGGTCACGCGGCGCCCATG
                                                                                                                                                                                                                                  GCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATCACCTTCATCCTCATCTCCCTG
                                                                                                                                                                                                                                          AlaProArgPheIleSerProAlaSerGlnLeuAlaIleThrPheValLeuIleSerLeu
                                                                                                                                                                                                                                                                                   GTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTGCTG
                                                                                     CTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGACCTG
                                                                                                                          GGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCGGCC
                                                                                                                                                                 LeuLeuThrLysThrAsnArgIleTyrArgIlePheGluGlnGlyLysArgSerValSer
                                                                                                                                                                                                                                                                         CAGGACCAACGGACACTTGACCCCCCCTTTGCCAGGGCGTGCTCAAGTGCGACATCTCG
                                                                                                                                                                                                                                                                                                                                                      GACCTGTCCCTCATCTGCCTGCTGGGCTACAGCATGCTGCTGATGGTCACGTGTACTGTG
                                                                                                                                                                                                                                                                                                                                                                 747 AspLeuSerLeulleCysLeuLeuGlyTyrSerMetLeuLeuMetValThrCysThrVal
                                                                                                                                                                                                                                                                                                                                                                                           TACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGGCCCATCGGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                      ACCATGTACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCATCTTTTTGGCACCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTGACGGTCTCCGTGAGTCTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCAACAAGTTCACACACAAGGCCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACAGACCTACGTCACCTACACCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATGCCATC 1752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ||||||||||||||
HisAlaIle 909
                                                        587
                                                                                                                                                                                                                667
                                                                                                                                                                                                                                                      687
                                                                                                                                                                                                                                                                                                                                                                                                                                  1384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1624
                                                                                                                                                                                            1024
                                                                                                                                                                                                                                    1084
                                                                                                                                                                                                                                                                          1144
                                                                                                                                                                                                                                                                                                                1204
                                                                                                                                                                                                                                                                                                                                                      1264
                                                                                                                                                                                                                                                                                                                                                                                            1324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1744
                                     784
                                                                           844
                                                                                             607
                                                                                                                 904
                                                                                                                                    627
                                                                                                                                                       964
                                                                                                                                                                          647
                                                                                                                                                                                                                                                                                            707
                                                                                                                                                                                                                                                                                                                                                                                                               767
                                                                                                                                                                                                                                                                                                                                                                                                                                                     787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  827
724
```

8 6 B 6

6 B 6

8 S

8 B

g ઠે g ઠે 셤

ઠે g ð 셤

8 & 8

ઠે

8 6 8

```
The invention comprises G-protein fusion receptors - comprising extracellular, transmembrane and intracellular domains similar to CaR, mcDlk or GABAB receptor sequences. The G-protein fusion receptors of the invention may also possess a linker joined to the carboxy terminus of the intracellular domain, and a G-protein joined to the linker. The G-protein fusion receptors of the invention are useful for identifying modulators of CaR, mcJuR and GABABR for use in treating associated conditions. The present amino acid sequence was used in the production of the invention. (Updated on 29-AUG-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel G-protein fusion receptor, useful for identifying modulators of CaR, mGluR and GABABR, comprises G-protein joined to the intracellular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 64 AGCCGCACGCTGGACAACAACAACATCTGGTTTGCCGAGTTCTGGGAGACAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGGTATCATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC
                                                                                                                                                                                                                                                                                                                                                          JE;
                                                                                                                                                                                                                                                                                                                                                           Garrett
                                                                                                                                    Human, G-protein fusion receptor; extracellular domain; transmembrane domain; intracellular domain; CaR; mGluR; GABABR; modulator identification.
                                                                                                                                                                                                                                                                                                                                                           Busby JG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    909
564
6
112
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                           Storjohann LL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (1-909)
                                                                                                               Human ph8SPmGluR4 chimeric protein.
                          ż
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; Fig 16; 168pp; English.
                          AAO15101 standard; protein; 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-828-332-6 (1-1755) x AAO15101
                                                                                                                                                                                                                                                                                                          03-OCT-2000; 2000US-00679664
                                                                                                                                                                                                                                                                                 03-OCT-2001; 2001WO-US031074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.8e-209
3004.50
97.77$
96.74$
                                                                                                                                                                                                                                                                                                                                                         Stormann T, Hammerland LG, Simin RT;
                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                  domain of the receptor.
                                                                           (revised)
                                                                                                                                                                                                                                                                                                                                    PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2002-330170/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No.:
Score:
Percent Similarity:
Best Local Similarit:
Oury Match:
                                                                                                                                                                                                                                WO200229033-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 909
                                                                                                                                                                                           Homo sapiens
Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                          29-AUG-2003
22-AUG-2002
                                                                                                                                                                                                                                                        11-APR-2002
                                                                                                                                                                                                                                                                                                                                  SdN (-dSdN)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                367
                                                  AA015101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            327
```

346 123 366

```
1023
                                                                                                                                                                                                                                                                    1083
                                                                                                                                                                                                                                                                                                  1143
                                                                                                                                                                                                                                                                                                                                1203
                                                                                                                                                                                                                                                                                                                                                               1263
                                                                                                                                                                                                                                                                                                                                                                                             1323
                                                                                                                                                                                                                                                                                                                                                                                                                             1383
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1623
                603
                             529
                                             663
                                                             549
                                                                            723
                                                                                            569
                                                                                                                         589
                                                                                                                                          843
                                                                                                                                                         609
                                                                                                                                                                        903
                                                                                                                                                                                        629
                                                                                                                                                                                                       963
                                                                                                                                                                                                                      649
                                                                                                                                                                                                                                                    699
                                                                                                                                                                                                                                                                                  689
                                                                                                                                                                                                                                                                                                                  709
                                                                                                                                                                                                                                                                                                                                                729
                                                                                                                                                                                                                                                                                                                                                                             749
                                                                                                                                                                                                                                                                                                                                                                                                            769
                                                                                                                                                                                                                                                                                                                                                                                                                                           789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     869
                                                                                                            783
               GCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCCTCCTTCCACCG
                                                                                     GACCTGTCCTCATCTGCCTGCTGGGCTACAGCATGCTGCTGATGGTCACGTGTACTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                       TyralaileLysThrArgGlyValProGluThrPheAsnGluAlaLysProileGlyPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGACCGCCGCCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LysValileGlySerTrpThrAspHisLeuHisLeuArgIleGluArgMetHisTrpPro
                                                                            TACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAGAAC
                                                                                                            CGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGGCCGTG
                                                                                                                   GTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTGCTG
                                                                                                                                                                                 CTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGACCTG
                                                                                                                                                                                                                                                                                                   GCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATCACCTTCATCTCATCTCCCTG
                                                                                                                                                                                                                                                                                                                                 CAGCTGCTCGCCATCTGCGTGTTCGTGGTGGACCCCTCCCACTCGGTGGTGGACTTC
                                                                                                                                                                                                                                                                                                                                          TACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCCAAGCCCATCGGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          810 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         830
                                                                                                                                                                                                                                                                                                                  690
                                                                                                                                                                                                                                                                                                                                                                                              1264
                                                                                                                                                                                                                                                                                                                                                                                                                              1324
                                                                                                                                                                                                                       630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1444
                                                                                                                                                                                        610
                                                                                                                                                                                                                                                                     1024
                                                                                                                                                                                                                                                                                                    1084
                                                                                                                                                                                                                                                                                                                                   1144
                                                                                                                                                                                                                                                                                                                                                                 1204
                                                                                                                                                                                                                                                                                                                                                                                                                                             770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       850
 190
                544
                               510
                                               604
                                                              530
                                                                              664
                                                                                             550
                                                                                                             724
                                                                                                                           570
                                                                                                                                           784
                                                                                                                                                           290
                                                                                                                                                                          844
                                                                                                                                                                                                        904
                                                                                                                                                                                                                                                                                                                                                 710
                                                                                                                                                                                                                                                                                                                                                                               730
                                                                                                                                                                                                                                                                                                                                                                                                               750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1564
                                                                                                                                                                                                                                                                                             8 8 6 8 6 8 6 8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8 6
                            셤
                                                          g
                                                                                          셤
                                                                                                       8 6
                                                                                                                                      6 B 6 B 6 B 6
                                                                                                                                                                                                                                                  8 & 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ያ ያ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
 8 &
                                        ∂
                                                                        8
                                                                                                                                                                                                                                                                                                                                                         369
                                                                                                                                                                                                                                                                                                                                                                                        389
                                                                                                                                                                           CDNA
                                                                                                                                                                                                                                                                                                                                                                                                       243
                                                                                                                                                                                                                                                                                                                                                                                                                       409
                                                                                                                                                                                                                                                                                                                                                                                                                                                     429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                543
                                                                                                                                                                                                                                                                                                                                                                        183
                                                                                                                                                                                                                                                                                                                                                                                                                                      303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     363
                                                                                                                              detection,
                                                                                                                                                                         mRNA from the human cerebellum was used to construct a cDNA library. cDNA axa amplified by PCR primers (AAT03896-97) based on rat mGluR4 sequences and with the primers given in AAT03898-99 to obtain cDNA encoding human mGluR4
                                                                                                                                                                                                                                                                                                            63
                                                                                                                                                                                                                                                                                                           350 SerargThrLeudspanabnargargabnIleTrpPhealaGluPheTrpGluAspasn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGCACCCAGCTGCTTAAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGGTCATCGGCTCGTGGACCACCCTCGCACCTCAGAATAGAGCGGATGCAGTGGCCA
                                                                                                                                                                                                                                                                                                                                          AGCCGCACGCTGGACAACAACAGGCGCAACATCTGGTTTGCCGAGTTCTGGGAGACAAC
                                                                                                                                                                                                                                                                                                                                                                                                       AACCGAGAGGGCATCGGGCAGGACTCGGCCTATGAGCAGGAGGGAAGGTGCAGTTCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                ATTGACGCTGTGTACGCCATGGGCCACGCCATGCACGTGACCTGTGTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                IleAspAlaValTyrAlaMetGlyHisAlaLeuHisAlaMetHisArgAspLeuCysPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACGCACCGGGGCGCTACGACATCTACCAGTACCAACTGCGCAATGGCTCGGCCGAGTAC
                                                                                                                           New isolated human metabotropic glutamate receptors - used for de diagnosis and therapy of diseases associated with the receptors, stroke, epilepsy and Alzheimer's disease.
                                                                                                                                                                                                                                       912
564
6
1
1
                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                             US-10-828-332-6 (1-1755) x AAR82658 (1-912)
                                                                                                                                                           Claim 2; Page 40-43; 55pp; English.
                                                                                                                                                                                                                                      2.81e-209
3004.50
97.77$
96.74$
                                               94GB-00003285.
                                95WO-GB000356
                                                                      (WELL ) WELLCOME FOUND LTD
                                                                                                     WPI; 1995-302715/39.
N-PSDB; AAT03888.
                                                                                                                                                                                                                              Alignment Scores:
Pred. No.:
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                 Ź
                                                                                                                                                                                                                Sequence 912
                                               21-FEB-1994;
01-AUG-1994;
                                21-FEB-1995;
                 24-AUG-1995
                                                                                     AJ;
                                                                                                                                                                                                                                                                                                                                                                                        370
                                                                                                                                                                                                                                                                                                                                                                         124
                                                                                                                                                                                                                                                                                                                                                                                                                        390
                                                                                                                                                                                                                                                                                                                                                                                                                                       244
                                                                                                                                                                                                                                                                                                                                                                                                                                                      410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   450
                                                                                                                                                                                                                                                                                                            6
                                                                                                                                                                                                                                                                                                                                          64
                                                                                                                                                                                                                                                                                                                                                                                                       184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                184
```

a

ò

ద

ò

6 6 6

മ്

6 8 6

원 수 명

ò 셤

389 243 409 429

449 423 469 483

```
ATTGACGCTGTGTACGCCATGGCCCACGCGTGCACGCCATGCACCGTGACCTGTGTCCC 303
                                                                                                                                                    GGCCGCGTAGGACTCTGCCTCGCATGGACCCCGTGGATGGCACCCCAGCTGCTTAAGTAC 363
                                                                                                                                                                                                                                                                    TyrGlnValAspArgTyrThrCysLysThrCysProTyrAspWetArgProThrGluAsn
          SerargThrLeudapdandandargargdan1leTrpPheAlaGluPheTrpGludapdan
                                                                                                                                                                                                                                                                                                                                                          TACCAAGTGGACCGCTACACTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
                                              AACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCAGGAGGGGGAAGGTGCAGTTCGTG
                                                                                    GACGCACCGGGGCGCTACGACATCTACCAGTACCAACTGCGCAATGGCTCGGCCGAGTAC
                                                                                                                                                                                                                                          AAGAAGACTGTGAAGGGCATGGCTTGCTGGTACTGCGAGCCCTGCACCGGGTACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                            CGCACGAGCTGCCAGCCCATCCCCCATCGTCAGTTGGAGTGGGACTCGCCGTGGGCCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAACCTTCAATGAGAACGGA
                                                                                                                                                                                                                                                                                                          GGGAGTGGCCAGCAGCTGCCGCGCTCCCATCTGCAGTCTGCCCTGCCCAGCCCGGGGAGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGCCCCTCTTCCTGGCCGTGGTGGGCATCGCCGCCACGCTGTTCGTGGTGGTCACGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATCACCTTCATCCTCATCTCCTG
                                                                                                                                  410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1024
                  350
                                    124
                                                       370
                                                                          184
                                                                                             390
                                                                                                               244
                                                                                                                                                                       430
                                                                                                                                                                                          364
                                                                                                                                                                                                             450
                                                                                                                                                                                                                                 424
                                                                                                                                                                                                                                                  470
                                                                                                                                                                                                                                                                     484
                                                                                                                                                                                                                                                                                         490
                                                                                                                                                                                                                                                                                                            544
                                                                                                                                                                                                                                                                                                                             510
                                                                                                                                                                                                                                                                                                                                                                   530
                                                                                                                                                                                                                                                                                                                                                                                                         550
                                                                                                                                                                                                                                                                                                                                                                                                                                              570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1084
                                                                                                                                                     304
                                                                                                                                                                                                                                                                                                                                                  604
                                                                                                                                                                                                                                                                                                                                                                                      664
                                                                                                                                                                                                                                                                                                                                                                                                                            724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               690
64
8 6 8 6
                                                                        ò
                                                                                     අ
                                                                                                        ઠ
                                                                                                                             g
                                                                                                                                              õ
                                                                                                                                                                  g
                                                                                                                                                                                    ઠે
                                                                                                                                                                                                         요
                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                         名 &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   중 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                    TGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACAGACCTACGTCACCTACACCAAC 1743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention relates to human metabotropic glutamate receptor (mGluR4) proteins and polynucleotides encoding such proteins. MGluR4 sequences of the invention are useful for treating acute and chronic neurodegeneration. They are also used as antipsychotic, anticonvulsant, analgesic, antidepressant and antiemetic agents. They are also useful for the diagnosis and/or treatment of conditions associated with an excess or deficiency of mGluR4. The present sequence is human mGluR4 protein
                                               63
                                                                                                                                                                                                                                                                                                                                                                                                         New nucleic acid encoding human metabotropic glutamate receptor, useful e.g. in screening for specific agonists and antagonists for treating e.g neurodegeneration.
TCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGGTATCATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC
                                                                                                                                                                                                            Human; metabotropic glutamate receptor; mGluR4; neurodegeneration; antipsychotic; anticonvulsant; analgesic; antidepressant; antiemetic.
                                                                                                                                                                                       metabotropic glutamate (mGluR4) receptor protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 912
564
12
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-912)
                                                                                                                                  Ę
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; Col 9-16; 35pp; English
                                                                                                                                   912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-828-332-6 (1-1755) x AAE23757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.81e-209
3004.50
97.77$
96.74$
                                                                                                                                                                                                                                                                                                                    96US-0013189P.
97US-00816178
                                                                                                                                                                                                                                                                                                  18-AUG-2000; 2000US-00641318
                                                                                                                                   standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2002-442818/47.
N-PSDB; AAD38024, AAD38025.
                                                                          CATGCCATC 1752
                                                                                            912
                                                                                                                                                                        (first
                                                                                                                                                                                                                                                                                                                                                 s
S
                                                                                    Wu S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity:
cal Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ž
                                                                                                                                                                                                                                                                                                                                                (ELIL ) LILLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 912
                                                                                                                                                                                                                                           sapiens.
                                                                                                                                                                                                                                                             US6384205-B1,
                                                                                                                                                                                                                                                                                                                    12-MAR-1996;
12-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                    Belagaje RM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gnment Scores:
                                                                                                                                                                       10-SEP-2002
                                                                                                                                                                                                                                                                               07-MAY-2002.
                 870
                                                       890
1624
                                    1684
                                                                         1744
                                                                                            910
                                                                                                                                  AAE23757
                                                                                                                                                     AAB23757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local S
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ..
..
                                                                                                                                                                                          Human
                                                                                                                                                                                                                                           Ношо
                                                                                                                œ
                                                                                                                                    용
                                    δ
                                                    셤
                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
```

489 543 509 529

603

549

723 569 783 589 843 609 903 629 963 649

663

1023

699

1083

689

1143

New isolated antigenic peptides e.g., for G protein-coupled receptors (GPCR), useful for diagnosing and designing drugs for treating conditions in which GPCRs are involved, e.g. AIDS, Alzheimer's disease, cancer or

autoimmune diseases.

(LIFE-) LIFESPAN BIOSCIENCES INC.

19-DEC-2000; 2000US-0257144P.

Brown JP;

Roush CL,

ပ္ပ

Burmer

WPI; 2003-046718/04. N-PSDB; ABZ42692.

ઠે

ò

```
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                 1443
                                                                                                                                                                                                                                                                                                                                                                                                                   1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1683
                                                                                                                                                               1323
                                                                                                                                                                                                                                                 1383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGTGAGAACCTGGAGACCCCAGCGCTGCCTACCAAACAGACCTACGTCACCTACACCAAC 1743
                                                                                                                                                                                                        769
                                                                                                                                                                                                                                                                                                                                                                          809
                                                                                                                                                                                                                                                                                                                                                                                                                                                         829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         G protein-coupled receptor; GPCR; antigenic peptide; gene therapy;
G protein-coupled receptor modulator; antibody; immune-related disease;
growth-related disease; cell regeneration-related disease; AIDS; cancer;
immunological-related cell proliferative disease; autoimmune disease;
Alzheimer's disease; atherosclerosis; infection; osteoarthritis; allergy;
osteoporosis; cardiomyopathy; inflammation; Crohn's disease; diabetes;
graft versus host disease; Parkinson's disease; multiple sclerosis; pain;
psoriasis; anxiety; depression; schizophrenia; dementia; memory loss;
mental retardation; epilepsy; asthma; tuberculosis; obesity; nausea;
hypertension; hypotension; renal disorder; rheumatoid arthritis; trauma;
                                                                                                                      749
                                                                                                                                                                                                                                                                                      789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GInLeuLeuGlyIleCysValTrpPheValValAspProSerHisSerValValAspPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                        AlaSerValSerLeuGlyMetLeuTyrMetProLysValTyrIleIleLeuPheHisPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GluGlnAsnValProLysArgLysArgSerLeuLysAlaValValThrAlaAlaThrMet
                                                                                 CAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGGCGTGCTCAAGTGCGACATCTCG
                                                                                                     GACCTGTCCCTCATCTGCCTGCTGGCTACAGCATGCTGCTGATGGTCACGTGTACTGTG
                                                                                                                                                                                  TACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGCTTC
                                                                                                                                                                                                                                                                      ACCATGTACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCCATCTTTTTGGCACCTCA
                                                                                                                                                                                                                                                                                                                                                      CAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTGACGGTCTCCGTGAGTCTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTTCAGTGTCCCTGGGGGATGCTCTACATGCCCAAAGTCTACATCCTCCTCTTCCACCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCACCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCAACAAGAGTTCACACAGAAGGGCAACTTCAGGCCCAATGGGGGAAGCCAAATCAGAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human metabotropic glutamate receptor 4 protein SEQ ID NO:176.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABP81846 standard; protein; 912 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATGCCATC 1752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  910 HisAlaile 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              04-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1744
                                      710
                                                                                                                                                                                                        750
                                                                                                                                                                                                                                                                                                                                 1384
                                                                                                                                                                                                                                                                                                                                                                          190
                                                                                                                                                                                                                                                                                                                                                                                                                   1444
                                                                                                                                                                                                                                                                                                                                                                                                                                                           810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABP81846;
                                                                                 1204
                                                                                                                      730
                                                                                                                                                                 1264
                                                                                                                                                                                                                                                 1324
                                                                                                                                                                                                                                                                                          770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABP 81846,

XX
AAC
ABP 8

XX
XX
XX
ABP 8

DY
XX
XX
DY
XX
XX
DY
XX
XX
C PL
XX
XX
C PL
XX
XX
C PL
XX
C PL
XX
C PL
XX
C C C
XX
C C

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            යු
                                                                                                                      셤
                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
```

```
The present invention describes antigenic peptides (I) comprising: (a) any one of 1601 sequences (see ABP82019 to ABP83619) of 12-24 amino caids. Also described: (I) an assay for the detection of a particular G protein-coupled receptor (GPCR) or a candidate polypeptide in a sample; and (2) an isolated antibody having high specificity and high affinity or articly for a particular GPCR. (I) can be used as GPCR modulators and in gene therapy. The antigenic peptides for GPCRs are useful in detecting an antibody against a particular GPCR. and in the production of specific antibody against a particular GPCR. and in the production of specific antibods. The peptides and antibodies are also useful for detecting the presence or absence of corresponding GPCRs. The antigenic peptides for GPCRs and antibodies are useful for diagnosing and designing drugs for treating immune-related diseases, immunological-related cell proliferative GPCRs and antibodies immune disease, immunological-related cell proliferative diseases, or autoimmune diseases, eg. ALDS, Alzheimer's disease, atherosclerosis, bacterial, fungal protozoan or viral infections, atherosclerosis, bacterial, fungal protozoan or viral infections, concertivities osteoporosis, cancer, cardiomyopathy, chronic and acute inflammation, allergies, Crohn's disease, graft versus host disease, parkinson's disease, multiple sclerosis, pain, psoriasis, concertivities, trauma, ulcers, or hypotension, renal disorders, rheumatoid arthritis, trauma, ulcers, or whypotension, renal disorders, rheumatoid arthritis, trauma, ulcers, or used in immunoassays and immunodiagnosis, and the present invention are used in the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTGACGCTGTGTACGCCATGGGCCACGCGTGCACGCCATGCACGTGACCTGTGTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TICCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AACCGAGAGCGCATCGGCCAGGACTCGGCCTATGAGCAGGAGGGGGAAGGTGCAGTTCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGGTATCATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCCGCACGCTGGACAACAACAGCGCCAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   912
6
6
1
1
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indel8:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-828-332-6 (1-1755) x ABP81846 (1-912)
Disclosure, Fig 1, 523pp, English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2.81e-209
3004.50
97.77%
96.74%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 912 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
```

19-DEC-2001; 2001WO-US050107.

WO200261087-A2

08-AUG-2002.

which is differentially regulated in an animal subjected to pain and a kit to perform the method, an array, a method for identifying an agent that increases or decreases the expression of the polymucleotide sequence that is differentially expression of the polymucleotide sequence which is differentially expression of a polymucleotide sequence which is differentially expressed in an animal subjected to pain, a method for identifying a compound that regulates the activity of one or more of the compound that regulates the activity of one or more of the compound that regulates the activity of one or more of the compound that regulates the activity of one or more of the compound that nation of one or more of the polymetrical composition composition composition treating pain and a pharmaceutical composition comprising the one or more oplypeptides or their antibodies. The polymucleotide or the compound that modulates its activity is useful for preparing a medicament for treating pain and appared nerve injury (CMI) in an animal (e.g. spinal segmental nerve injury (SNI)) in an animal (e.g. spinal sequence presented is a human protein (shown in Table 2 of the sequence data for this patent did not form part of the printed specification) whit was obtained in electronic form directly from WIPO at ftp.wipo.int/pub/published_pct_sequences

Sequence 912 AA;

912 564 6 112 Length:
Matches:
Conservative:
Mismatches:
Indels: Gaps: 2.81e-209 3004.50 97.77% 96.74% Percent Similarity: Best Local Similarity: Alignment Scores: Pred. No.: Query Match: DB: Score:

US-10-828-332-6 (1-1755) x ADE58170 (1-912)

ઠ g ઠ 셤 δ 셤 ઠે 셤 ò g ò a ઠે 셤 ઠે g ઠે 셤

0 GlySe
AAGTGGACCGCTACACCTGCTACTTERFINES AAGTGGACCGCTACACCTGTAAGACCTGCCCT
CGAGCTGCCAC :: hrGlyCysArg
CCCTCTTCCTG
GCTACAACGATV rgTyrAsnAsp'
CGGCCATCTTT(
ccrgrrcgcrcc
TGACCAAGACCA
CGCGTTTCATCA roArgPheIleS
TGCTCGGCATCTC
ACCAACGGACAC' spGlnArgThrL
TGTCCCTCATCT(
CCATCAAGACCC aileLysThrA
TGTACACCACCTC
CAGCCGACAAGCT
CAGTGTCCCTGGG
AGAACGTGCCCA nAsnValProLy
624 TCCAACAAGTTCACACAAAGGCAACTTCAGGCCAATGGGGAAGCCAAATCAGAGCTG 168

ઠ

```
Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                450
                                                                                                                                                                                                                                                                                                                                                                                                                             64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              844
                                                                                                                                                                                                                 Query Match:
DB:
                                                                                                                       Pred. No.:
                                                                                                                                               Score:
                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                               පු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention discloses a composition comprising two or more isolated rate or human polymucleotides or a polymucleotide which represents a fragment, cor human polymucleotides or a polymucleotide which represents a fragment, comprisity or allelic variation of the nucleic acid sequence. Also claimed are a vector comprising the novel polymucleotide, a host cell comprising the vector, a method for identifying a nucleotide sequence that is differentially regulated in an animal subjected to pain and a compound that increases or decreases the expression of the polymucleotide sequence that is differentially expressed in neuronal tissue of a first animal subjected to pain, a method for identifying a compound which regulates the expression of a polymucleotide sequence which is differentially compound that regulates the activity of one or more of the compound that regulates the activity of one or more of the compound that regulates the activity of one or more of the composition, a method for identifying a compound to small molecule that regulates the activity in an animal of one or more of the polymetical composition, a method for identifying a compound useful in treating pain and a pharmaceutical composition comprising the one or more of polympetides or their antibodies. The polymucleotide or the compound that compound that expensed nerve injury (CMung), chronic constriction injury (CCI) and spared nerve injury (SNI) in an animal (e.g. gene conjury). The sequence presented is a human protein (shown in Table 2 of the specification) which is differentially expressed during pain. Note: The sequence data for this patent did not form part of the printed
New composition comprising two or more isolated polypeptides, useful for preparing a medicament for treating pain in an animal.
                                                                                                                                                                                                                                                                                                                                                                                                                        Human; pain; neuronal tissue; gene therapy;
spinal segmental nerve injury; chronic constriction injury; CCI;
spared nerve injury; SNI; Chung.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Costigan M;
                                                                                                                                                                                                                                                                                                                                                                             Human Protein Q14833, SEQ ID NO 4037
                                                                                                                                                                                                                                    $
                                                                                                                                                                                                                                  ADE58166 standard; protein; 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1, Page; 1017pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Befort K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14-AUG-2001; 2001US-0312147P.
01-NOV-2001; 2001US-0346382P.
26-NOV-2001; 2001US-0333347P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14-AUG-2002; 2002WO-US025765
                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (GEHO ) GEN HOSPITAL CORP. (FARB ) BAYER AG.
                                                                                          1744 CATGCCATC 1752
                                                                                                                       D'urso D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2003-268312/26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO2003016475-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENBANK; 014833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ното варіепв
                                                                                                                                                                                                                                                                                                                              29-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27-FEB-2003
1684
                                                                                                                                        910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Woolf C,
                                                                                                                                                                                        RESULT 11
                                                                                                                                                                                                            ADES 116 ADES 120 ADE
```

```
469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               903
                                                                                                                                                                                                                                 123
                                                                                                                                                                                                                                                                                            TTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC 183
                                                                                                                                                                                                                                                                                                                                                                  389
                                                                                                                                                                                                                                                                                                                                                                                               243
                                                                                                                                                                                                                                                                                                                                                                                                                            409
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGCCATGCACCGTGACCTGTGTCCCC 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGCCGCGTAGGACTCTGCCTCGCATGGACCCCGTGGATGGCACCCAGCTGCTTAAGTAC 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACGTGCGGCCCACAGAGAAC 723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        843
   at
specification, but was obtained in electronic form directly from WIPO ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                      IleAspAlaValTyrAlaMetGlyHisAlaLeuHisAlaMetHisArgAspLeuCysPro
                                                                                                                                                                                                                                                                                                                                                                                                AACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCAGGAGGGGAAGGTGCAGTTCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCCGCACGCTGGACAACAACAGGCGCAACATCTGGTTTGCCCGAGTTCTGGGAGGACAAC
                                                                                                                                                                                                                                                                                                                                                                                                               AsnArgGluArgIleGlyGlnAspSerAlaTyrGluGluGluGluGlyLysValGlnPheVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGAAGACTGTGAAGGGCATGGCTTGCTGCTGCTGCGAGCCCTGCACCGGGTACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGGCCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGGTATCATCATCTTTGCCAACGAGGATGACA----TCAGGGTTCGACCGATACTTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAACCTTCAATGAGAACGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCTGCCCTGCCAGCCCGGGGGAGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGCCCCTCTTCCTGGCCGTGGTGGCATCGCCGCCACGCTGTTCGTGGTGGTCACGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGGCCA
                                                                                       912
564
6
112
1
                                                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                            Gaps:
                                                                                                                                                                                        US-10-828-332-6 (1-1755) x ADE58166 (1-912)
                                                                                   2.81e-209
3004.50
97.77$
96.74$
                                                                                                                Percent Similarity:
Best Local Similarity:
                                           Sequence 912 AA;
```

```
1203
                                                                                                                                                                                                                                                                                                                                              1443
                                                            1023
                                                                                                   1083
                                                                                                                                                                                                                         1263
                                                                                                                                                                                                                                                               1323
                                                                                                                                                                                                                                                                                                      1383
                                                                                                                                                                                                                                                                                                                                                                                     1503
                                                                                                                                                                                                                                                                                                                                                                                                                            1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACAGACCTACGTCACCTACACCAAC 1743
                                                                                                                                                                                                                                                                                                                                                                                                        829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      869
                                        649
                                                                               699
                                                                                                                                                            709
                                                                                                                                                                                                     729
                                                                                                                                                                                                                                            749
                                                                                                                                                                                                                                                                                  694
                                                                                                                                                                                                                                                                                                                         789
                                                                                                                                                                                                                                                                                                                                                                809
                                                                                                                                                                                                                                                                                                                                                                                                                                              849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GluGlnAsnValProLysArgLysArgSerLeuLysAlaValValThrAlaAlaThrMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    610 ValArgTyrAsnAspThrProlleValLysAlaSerGlyArgGluLeuSerTyrValLeu
                     CTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGACCTG
                               GGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCGGCC
                                                                                                   GCCCCGGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATCACCTTCATCTCATCTCCCTG
                                                                                                                                                                                 CAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGACCCCCTCCCACTCGGTGGACTTC
                                                                                                                                                                                            CAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGGCGTGCTCAAGTGCGACATCTCG
                                                                                                                                                                                                                                   GlnAspGlnArgThrLeuAspProArgPheAlaArgGlyValLeuLysCysAspIleSer
                                                                                                                                                                                                                                                                GACCTGTCCCTCATCTGCCTGCTGGGCTACAGCATGCTGCTGATGGTCACGTGTACTGTG
                                                                                                                                                                                                                                                                          TACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGCTTC
                                                                                                                                                                                                                                                                                                                 1384 ACCATGTACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCATCTTTTTTGGCACCTCA
                                                                                                                                                                                                                                                                                                                                                           ThrMetTyrThrThrCysIleValTrpLeuAlaPheIleProIlePhePheGlyThrSer
                                                                                                                                                                                                                                                                                                                                                                                                                            GCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCATCATCCTTCCACCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCACATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCCAATGGGGAAGCCAAATCAGAGCTG
                                                                                                                                                                                                                                                                                                                                                                                     CAGTCAGCCGACAGCTGTACATCCAGACAACCACACTGACGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human novel GPCR GRM4, SEQ ID NO:193.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ą.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADO29094 standard; protein; 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1744 CATGCCATC 1752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        910 HisAlaile 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-JUL-2004
                                                                                                                                                                                                                                                                                                                          770
                                                                                                   1024
                                                                                                                                                                                                                                                                1264
                                                                                                                                                                                                                                                                                                      1324
                                                                                                                                                                                                                                                                                                                                                                                     1444
                                                                                                                                                                                                                                                                                                                                                                                                                            1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADO29094;
                     904
                                         630
                                                            964
                                                                                650
                                                                                                                                           1084
                                                                                                                                                                                   1144
                                                                                                                                                                                                     710
                                                                                                                                                                                                                         1204
                                                                                                                                                                                                                                            730
                                                                                                                                                                                                                                                                                                                                                                 790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 12
                                       g
                                                           ò
                                                                            셤
                                                                                                   ò
                                                                                                                     g
                                                                                                                                         ò
                                                                                                                                                         셤
                                                                                                                                                                                 ઠે
                                                                                                                                                                                                   셤
                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                요
                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                      유
                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #X#X#X#X
                   ò
```

transgenic mouse; neurological disorder; adrenal gland disorder; colon disorder; intestinal disorder; cardiovascular disorder; muscular disorder; prome disorder; joint disorder; blood disorder; immune disorder; bone disorder; joint disorder; metabolic disorder; nutritive disorder; accer; kidney disorder; liver disorder; lung disorder; breast disorder; ovary disorder; tenent disorder; prostate disorder; setis disorder; skin disorder; tenent disorder; pancreas disorder; spleen disorder; thymus disorder; thyroid disorder; antiparkinsonian; antimanic; cytostatic; antiinflammatory; vasotropic; antianginal; antiarhythmic; virucide; hepatotropic; antibacterial; antianaemic; antidiabetic; virucide; hepatotropic; antithyroid; antiallergic; antidiabetic; dermatological; antiulcer; antithyroid; antiallergic; antiseborrhoeic; immunosuppressive; nephrotropic; gene therapy; GPCR modulator; human; Novel mammalian G protein coupled receptors, useful for identifying compounds that modulates diagnosing and treating disease condition associated with GPCR dysfunction e.g. autoimmune diseases, angina Li F; Zeng H; Hohmann J, A, Hohmann J, Vassilatis D, IE, Gragerov Pavlova MN, pectoris, Parkinson's disease. 09-SEP-2002; 2002US-0409303P. 09-SEP-2003; 2003WO-US028226 Gaitanaris GA, Bergmann JE, Madisen L, Mcilwain KL, Pa 2004-390329/36. (PRIM-) PRIMAL INC. N-PSDB; AD029776. Homo sapiens. 13-MAY-2004. receptor

Claim 1; SEQ ID NO 193; 542pp; English.

The invention relates to human and mouse G protein-coupled receptors

(GPCRs) and nucleic acids encoding them. The invention also relates to sequences at least 90% identical to the GPCR proteins and nucleic acids.

Of the invention; methods of treating, preventing or diagnosing diseases associated with GPCRs of the invention; methods of screening for compounds useful in the treatment of GPCR-related diseases, a transgenic compounds useful in the treatment of GPCR-related diseases, a transgenic mouse comprising a GPCR transgene or in an endogenous GPCR gene; cells derived from the trasngenic mice; kits comprising several mice, each of which has a mutation in a different GPCR gene of the invention; and kits comprising comprising a GPCR nucleic acid. The GPCR polypeptides and vectors comprising a GPCR nucleic acid. The GPCR nucleic acids and proteins may be used in the diagnosis, treatment or prevention of a wide variety of comprising a GPCR nucleic acid. The GPCR nucleic acids and proteins may be used in the diagnosis, treatment or prevention of a wide variety of diseases including neurological disorders (e.g., Alzheimer's disease, disease, diarrhoen, food poisoning or irritable bowel syndrome); cardiovascular disorders (e.g., augina, cardiac arrhythmia or macemia or leukaemia); immune disorders (e.g., autoimmune disorders (e.g., anomania or leukaemia); immune disorders (e.g., autoimmune disorders (e.g., anomania or leukaemia); methodis sonders (e.g., autoimmune disorders (e.g., anomania or leukaemia); methodis (e.g., cancers); and disorders (e.g., autoimmune disorders (e.g., anomania or leukaemia); immune disorders (e.g., autoimmune disorders (e.g., cancers); and disorders (e.g., autoimmune disorders (e.g., au

protein-coupled receptor; GPCR; drug screening; diagnosis;

Ö

ઠે 셤 ઠે 8 S

6 6 6 6

8 8 8

8 6 8 6

```
1143
                                                                                                                 1263
                                                                                                                                                                                         1443
                                                                                                                                        1323
                                                                                                                                                                 1383
                                                                                                                                                                                                                                        1563
                                                                                                                                                                                                                                                                GAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCCATG 1623
                                                                                                                                                                                                               CAGTCAGCCGACAAGCTGTACATCCAGACAACCACTGACGGTCTCCGTGAGTCTGAGC 1503
                                                                                                                                                                             789
                                                                                                                                                     769
                                                                                                                                                                                                    809
                                                                                                                                                                                                                            829
                                                                                                                                                                                                                                                   849
                                                                                                                                                                                                                                                                                                               TCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAATGGGGGAAGCCAAATCAGAGCTG
710 GlnLeuLeuGlylleCysValTrpPheValValAspProSerHisSerValValAspPhe
                                                                                                                                                                 TACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGCTTC
                                                                                                                                                                                                                      urological disorder; uropathic; cytostatic; urinary incontinence; benign prostatic hyperplasia; human.
                                                                                                                                                                                                                                                                                                                                                                                                               Human urological disorder related protein 115 SEQ:66
                                                                                                                                                                                                                                                                                                                                                                            Ź
                                                                                                                                                                                                                                                                                                                                                                            ADQ89114 standard; protein; 912
                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                        CATGCCATC 1752
                                                                                                                                                                                                                                                                                                                                                    HisAlaile 912
                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                    21-OCT-2004
                             650
                                          1024
                                                                  1084
                                                                                         1144
                                                                                                                  1204
                                                                                                                                         1264
                                                                                                                                                                 1324
                                                                                                                                                                                         1384
                                                                                                                                                                                                                1444
                                                                                                                                                                                                                                         1504
                                                                                                                                                                                                                                                                 1564
                                                                                                                                                                                                                                                                                        1624
                                                                                                                                                                                                                                                                                                                 1684
                                                                                                                                                                                                                                                                                                                                        1744
                                                                                                                                                                                                                                                                                                                                                                                        ADQ89114;
                  964
                                                                                                                             730
                                                                                                                                                                                                     790
                                                                                                                                                                                                                             810
                                                                                                                                                                                                                                                                            850
                                                                                                                                                                                                                                                                                                    870
                                                                                                                                                                                                                                                                                                                             890
                                                                                                                                                                                                                                                                                                                                                    910
                                                                                                                                                                                                                                                                                                                                                                a &
                           셤
                                      ò
                                                  g
                                                                8 8
                                                                                     8 6 8 6
                                                                                                                                     & B &
                                                                                                                                                                         셤
                                                                                                                                                                                        8 8 8
                                                                                                                                                                                                                         名 &
                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                         6 B
                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                       ठ
                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                   389
                                                                                                                                                           409
                                                                                                                                                                     244 ATTGACGCTGTGTACGCCATGGCCACGCGCTGCACGCCATGCACCTGTGTCCC 303
                                                                                                                                                                                                                                             349
                                                                                               123
                                                                                                           369
                                                                                                                       183
                                                                                                                                               243
                                                                                                                                                                                                           449
                                                                                                                                                                                                                       423
                                                                                                                                                                                                                                  469
                                                                                                                                                                                                                                                                       543
                                                                                                                                                                                                                                                                                   509
                                                                                                                                                                                                                                                                                               603
                                                                                                                                                                                                                                                                                                          529
                                                                                                                                                                                                                                                                                                                                                                     783
                                                                                                                                                                                                                                                                                                                                                                                  589
                                                                                                                                                                                                                                                                                                                                                                                              843
                                                                                                                                                                                                                                                                                                                                                                                                          609
                                                                                                                                                                                                                                                                                                                                                                                                                      903
                                                                                                                                                                                                                                                                                                                                                                                                                                 629
                                                                                                                                                                                                                                                                                                                                                                                                                                              963
                                                                                                                                                                                               GGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGCACCCAGCTGCTTAAGTAC 363
                                                                       63
                                                                                              AGCCGCACGCTGGACAACAACAGGCGCAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC
                                                                                                                     TTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAAGCCACATCAAGAAGTGCACC
                                                                                                                             AACCCAAGAGCGCATCGGGCAGGACTCGGCCTATGAGCAGGGGGGGAGAGGTGCAGTTCGTG
                                                                                                                                                                                                                                                                            904 CTGGCGGCCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGACCTG
                                                                             7 GGGGTATCATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                     AAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGGCCA
                                                                                                                                                                                                                                                                                              912
564
6
112
                 Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                           US-10-828-332-6 (1-1755) x ADO29094 (1-912)
                 2.81e-209
3004.50
97.77$
96.74$
                            Percent Similarity:
Best Local Similarity:
Query Match:
DB:
Ä
Sequence 912
            Alignment Scores
                                                                                   330
                                                                                                                                   370
                                                                                                                      124
                                                                                                                                                                                                                                                                                                                                                                                                          590
                                                                                              64
                                                                                                                                              184
                                                                                                                                                                                                                                                                                                                                                                                              784
                                                                                                                                                                                               304
                                                                                                                                                                                                                                                                       484
                                                                                                                                                                                                                                                                                              544
                                                                                                                                                                                                                                                                                                                                                                     724
                   ..
8
```

8 6 8 6

666666

a ઠે g ઠે

```
GACCTGTCCCTCATCTGCCTGCTGGGCTACAGCATGCTGCTGATGGTCACGTGTACTGTG
                                            GGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGCACCCCAGCTGCTTAAGTAC
                                                                                                                    ATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAACCTTCAATGAGAACGGA
                                                                                                                               GACGCACCGGGGCCCTACGACATCTACCAGTACCAACTGCGCAATGGCTCGGCCGAGTAC
                                                                                                                                                                                                        AAGGTCATCGCCTCGTGGACAGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGGCCA
                                                                                                                                                                                                                   AAGAAGACTGTGAAGGGCATGGCTTGCTGCTGCACTGCGAGCCCTGCACCGGGTACCAG
                                                                                                                                                                                                                                                                                                                                                                              CGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGGCCGTG
                                                                                                                                                                                                                                                                                                                                                                                         CTGCCCCTCTTCCTGGCCGTGGGCATCGCCGCCACGCTGTTCGTGGTGGTCACGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                GIGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCCGGGAACTGAGCTACGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGCTGCTCGGCATCTGCGTGGTTCGTGGTGGACCCCTCCCACTCGGTGGTGGACTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGGCGTGCTCAAGTGCGACATCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1144
             390
                                  244
                                                      410
                                                                            304
                                                                                               430
                                                                                                                     364
                                                                                                                                          450
                                                                                                                                                              424
                                                                                                                                                                                    470
                                                                                                                                                                                                         484
                                                                                                                                                                                                                             490
                                                                                                                                                                                                                                                 544
                                                                                                                                                                                                                                                                      510
                                                                                                                                                                                                                                                                                           604
                                                                                                                                                                                                                                                                                                                530
                                                                                                                                                                                                                                                                                                                                     664
                                                                                                                                                                                                                                                                                                                                                         550
                                                                                                                                                                                                                                                                                                                                                                               724
                                                                                                                                                                                                                                                                                                                                                                                                  570
                                                                                                                                                                                                                                                                                                                                                                                                                       784
                                                                                                                                                                                                                                                                                                                                                                                                                                            590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1264
                                                    g
                                                                                          g
                                                                                                                                        셤
                                                                                                                                                                             g
                                                                                                                                                                                                      8 8
                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                      요
                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             요
                          8
                                                                            à
                                                                                                                    ઠે
                                                                                                                                                         જે
                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                             The present invention describes the use of polypeptides related to urological disorders for identifying a compound capable of treating a urological disorder, identifying a subject having a urological disorder.

or treating a subject having a urological disorder. Also described: (1) a method for identifying a urological disorder; and disorder; (2) a method for identifying a subject having a urological disorder; and (3) a method for treating a subject having a urological disorder. The compound has uropathic and cytostatic activities. The polypeptides related to urological disorders are useful for identifying a compound capable of treating a urological disorder, identifying a subject having a urological disorder. Identifying a subject having a urological disorder include urinary incontinence and benign prostatic hyperplasia. The present sequence repersents a human urological disorder related protein, which is used in the exemplification of the present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCCGCACGCTGGACAACAACAGCGCAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCAGGAGGGGAAGGTGCAGTTCGTG 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63
                                                                                                                                                                                                                                                                      Use of polypeptides related to urological disorders, e.g. 44390, 54181, 211 or for identifying a compound capable of treating a urological disorder or identifying and treating a subject having a urological
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 912
564
6
112
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                    SD;
                                                                                                                                                                                                                   Eliasof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-828-332-6 (1-1755) x ADQ89114 (1-912)
                                                                                                                                                                                                                                                                                                                           Claim 1; SEQ ID NO 66; 542pp; English
                                                                                                                                                                                                                   Karicheti V, Silos-Santiago I,
                                                                         15-JAN-2003; 2003US-0440318P.
04-FEB-2003; 2003US-044783P.
27-MAX-2003; 2003US-0457901P.
19-MAX-2003; 2003US-0468775P.
16-JUN-2003; 2003US-0471614P.
16-JUN-2003; 2003US-0471614P.
16-JUN-2003; 2003US-0471614P.
30-JUL-2003; 2003US-0491156P.
02-SEP-2003; 2003US-04991156P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2.81e-209
3004.50
97.77$
96.74$
                                                        2004WO-US000750
                                                                                                                                                                                                MILLENNIUM PHARM INC
                                                                                                                                                                                                                                        WPI; 2004-562167/54.
N-PSDB; ADQ89113.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score:
Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 912 AA;
              WO2004065576-A2
                                                       14-JAN-2004;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gnment Scores:
                                   05-AUG-2004
                                                                                                                                                                                                                                                                                                      disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ..
0
    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

549

569

783 589 843 609 903 629 649

723

1023

699

1083

689

1143

1203

729

1263

749

```
TACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCCACAGAGAAC 723
                                                                                                                                                                                                                                                                                                                ATTGACGCTGTGTACGCCATGGCCCACGCGCTGCACGCCATGCACCGTGACCTGTGTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGCCGCGTAGGACTCTGCCCTCGCATGGACCCCCGTGGATGCCACCCAGCTGCTTAAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AspalaProGlyargTyrAspIleTyrGlnTyrGlnLeuArgAsnAspSerAlaGluTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 were isolated from a cerebellum cDNA library using a rat mGluR4 probe Clone cmR20 lacked the 5' end of the hmGluR4 gene. PCR using human genomic or brain cDNA as template was used to obtain a complete gene sequence (given in AAQ89342) encoding hmGluR4 (AAR72092). Recombinant hmGluR4 was produced in mammalian cells. (Updated on 25-WAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                             AGCCGCACGCTGGACAACAACAGCCCCAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC
                                                                                                                                                                                                                                                                                                                                                                                                                         TTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AACCGAGAGCGCATCGGCCAGGACTCGGCCTATGAGCAGGAGGGGAAGGTGCAGTTCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GACGCACCGGGGCGCTACGACATCTACCAGTACCAACTGCGCAATGGCTCGGCGGGGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAGAAGACTGTGAAGGGCATGGCTTGCTGCCACTGCGAGCCCTGCACGGGTACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGCACGAGCTGCCCAGCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGGCCGTG
                                                                                                                                                                                                                                                                                                  GGGGTATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGGTCATCGGCTCGTGGACAGACCTCCTCACATAGAGCGGATGCAGTGGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGGAGTGGCCAGCTGCCGCGCTCCATCTGCAGTCTGCCCTGCCAGCCCGGGGAGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGCCCCTCTTCCTGGCCGTGGTGGCGATGCCGCCACGCTGTTCGTGGTGGTCACGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              912
7
7
1
1
                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                  (1-912)
                                                                                                                                                                                                                                                                   US-10-828-332-6 (1-1755) x AAR72092
                                                                                                                                                          4.64e-209
3001.50
97.77$
96.57$
                                                                                                                                                                         Score:
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                               Sequence 912 AA;
                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                              330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    530
                                                                                                                                                                                                                                                                                                                                                             64
                                                                                                                                                                                                                                                                                                                                                                                                                         124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          784
                                                                                                                                                             ..
No.:
       888888888
                                                                                                                                                                                                                                                                                                                                                                                                                        8 8 8
                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                 අ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ନ୍ଧ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                 1443
                                                                                                                                                            1503
                                                                                                                                                                                                                       1563
                                                                                                                                                                                                                                                                                  1623
                                                                                                                                                                                                                                                                                                                                              1683
                                                                                                                                                                                                                                                                                                                                                                                                         789
                                                                                                                             809
                                                                                                                                                                                        829
                                                                                                                                                                                                                                                   849
                                                                                                                                                                                                                                                                                                              869
                                                                                                                                                                                                                                                                                                                                                                             889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               d 7 - also
modulate
                                                                                                                                                            CAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTGACGGTCTCCGTGAGTCTGAGC
                                                                                                                                                                                                                    GCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCCTCCTTCCACCG
                                                                                                                                                                                                                                                                                TCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAGCTG
                                                                                                                 TyralaileLysThrArgGlyValProGluThrPheAsnGluAlaLysProileGlyPhe
                                                                                              1384 ACCATGTACACCACCTGCATTGTCTGGCTTGGCCTTCATCCCCATCTTTTTGGCACCTCA
       AspleuSerLeuIleCysLeuLeuGlyTyrSerMetLeuLeuMetValThrCysThrVal
                                                                                                                                                                             Human metabotropic glutamate receptor subtype 4 (hmGluR4) cDNA clones
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human metabotropic glutamate receptor sub-type(s), esp. 4, 6 and corresp. DNA and antibodies, useful for identifying cpds. which m signal transduction activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       hmGluR4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mGluR4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Knoepfel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       subtype
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Puettner I,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2; Page 44-48; 110pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ź
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 standard, protein; 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      χ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        glutamate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         93EP-00810663.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              94WO-EP002991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kuhn R, Lindauer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATGCCATC 1752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GEIGY AG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1995-139596/18.
N-PSDB; AAQ89342.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         metabotropic transducer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9508627-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-SEP-1993;
19-AUG-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (CIBA ) CIBA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human mGluR4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25-MAR-2003
26-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-MAR-1995
                                                                  170
                                                                                                                                                                                        810
                                                                                                                                                                                                                                                     830
                                                                                                                                                                                                                                                                                                                                                                             870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    910
                                    1324
                                                                                                                                                            1444
                                                                                                                                                                                                                     1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1744
       750
                                                                                                                                                                                                                                                                                                                                              1624
                                                                                                                                                                                                                                                                                                                                                                                                           1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAR72092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Flor PJ,
                                                                                                                                                                                                                                                                                  1564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAR72092;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human m
signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ношо
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAR72092

ID AAR7

XX AAR7

XX AAR7

XX AAR7

XX Huma

XX Y Huma

XX Y Huma

YX Y CIB

YX Y CIB

YX Y Huma

YX Y CIB

YX Y Huma

YX Y CIB

YX Y Huma

YX Y CIB

XX Y CIB

XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT
      셤
                                                                 셤
                                                                                                                      g
                                                                                                                                                          δ
                                                                                                                                                                                  g
                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                    õ
                                                                                      ઠે
                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

243 409 303 429 363 449 423 469 483 489

509

543

529

663 549 569 783 589 843

603

183

```
1023
                                                                                                                     1083
                                                                                                                                                       1143
                                                                                                                                                                                         1203
                                                                                                                                                                                                                           1263
                                                                                                                                                                                                                                                            1323
                                                                                                                                                                                                                                                                                              1383
                                                                                                                                                                                                                                                                                                                               1443
                                                                                                                                                                                                                                                                                                                                                                 1503
                                                                                                                                                                                                                                                                                                                                                                                                   1563
                                                                                                                                                                                                                                                                                                                                                                                                                                   1623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACAGACCTACGTCACCTACACCAAC 1743
                                                                                                                                                                        709
                                                                                                                                                                                                         729
                                                                                                                                                                                                                                                                                                                                                                                                                                                    869
                                                                    649
                                                                                                     699
                                                                                                                                     689
                                                                                                                                                                                                                                            749
                                                                                                                                                                                                                                                                            769
                                                                                                                                                                                                                                                                                                              789
                                                                                                                                                                                                                                                                                                                                                809
                                                                                                                                                                                                                                                                                                                                                                                 829
                                                                                                                                                                                                                                                                                                                                                                                                                  849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LeuProLeuPheLeuAlaValGlyIleAlaAlaThrLeuPheValValIleThrPhe
                                                                                                                                                               GCTTCAGTGTCCCTGGGGGATGCTCTACATGCCCAAAGTCTACATCATCCTTCCACCG
                                                                                                                                                                                                                                                                                                                                                                                                              SerAsniyaPheThrGlnLysGlyAsnPheArgProAsnGlyGluAlaLysSerGluLeu
                 GTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGGCTACGTGCTG
                          CTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGACCTG
                                                             GGGACCTGTTCGCTCCGCCGCATCTTCCTAGGCCTCGGCATGAGCATCAGCTACGCGGCC
                                                                                             GCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCCATCACCTTCATCCTCATCTCCCTG
                                                                                                                                                                                         CAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGACCCCTCCCACTCGGTGGTGGTACTTC
                                                                                                                                                                                                                           CAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGGCGTGCTCAAGTGCGACATCTCG
                                                                                                                                                                                                                                                            GACCTGTCCCTCATCTGCCTGCTGGCTACAGCATGCTGCTGATGGTCACGTGTACTGTG
                                                                                                                                                                                                                                                                       TACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGCTTC
                                                                                                                                                                                                                                                                                                       ACCATGTACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCCATCTTTTTGGCACCTCA
                                                                                                                                                                                                                                                                                                                                                                 CAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTGACGGTCTCCGTGAGTCTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCACATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CATGCCATC 1752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   710
                                                                                                                                                                                                                                                                                                                                                                                                                    830
                                                                                                                                                                                                                                                                                                                                                                                                                                                      850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       870
                                                                                                                      1024
                                                                                                                                                        1084
                                                                                                                                                                                                                                                             1264
                                                                                                                                                                                                                                                                                              1324
                                                                                                                                                                                                                                                                                                                                                                 1444
                                                                                                                                                                                                                                                                                                                                                                                                   1504
                                                                                                                                                                                                                                                                                                                                                                                                                                     1564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          910
                 844
                                                    904
                                                                    630
                                                                                    964
                                                                                                     650
                                                                                                                                       670
                                                                                                                                                                        690
                                                                                                                                                                                         1144
                                                                                                                                                                                                                            1204
                                                                                                                                                                                                                                            730
                                                                                                                                                                                                                                                                                                               770
                                                                                                                                                                                                                                                                                                                                1384
                                                                                                                                                                                                                                                                                                                                                790
                                                                                                                                                                                                                                                                                                                                                                                  810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 15
                                 8
                                                                                                  g
                                                                                                                     ò
                                                                                                                                   요
                                                                                                                                                      8
                                                                                                                                                                      g
                                                                                                                                                                                        ઠે
                                                                                                                                                                                                     셤
                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                  임
                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ሯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                 ò
                                                   ò
                                                                 셤
                                                                                   ઠે
```

591 AA.

ADR08623 standard; protein;

04-NOV-2004 (first entry)

ADR08623;

This invention relates to novel, isolated full length human CDNA molecules and the encoded proteins thereof. Specifically, it refers to conductules and the encoded proteins thereof. Specifically, it refers to conduct a constant of the capping method, where none of these clones are identical to any known human mRNAs. The present invention describes an immunoassay to identify agonists and antagonists, as well as antibodies, antisense molecules and siRNAs that can all be used to bind to antibodies, antisense molecules and siRNAs that can all be used to bind to antibodies are useful for diagnostic markers or therapeutic targets for the various disease or morbid states. In particular, they are useful in the various disease, morbid states. In particular, they are useful in the various disease, dementia, short memory and various cancers, as well as for maintaining equilibrium of sense or motor function, and the reating encional reaction, fear response and panic. Accordingly, they exhibit osteopathic, neuroprotective, nootropic, antiparkinsonian, cytostatic and tranquiliser activities. This polypeptide is a protein encoded by a full length human cDNA sequence of the invention. NOTE: This sequence is not given in the sequence listing of the specification but can be obtained on CD-ROM from the Buropean Patent Office, Vienna Sub-AGCCGCACGCTGGACAACAACAGGCGCAACATCTGGTTTGCCGAGTTCTGGGAGGACAAC 123 New 1995 cDNA, useful for treating osteoporosis, neurological diseases, Alzheimer's diseases, Parkinson's diseases, dementia and various cancers 63 41 61 human; oligo-capping method; diagnostic marker; gene therapy; osteoporosis; neurological disease; Alzheimer's disease; Parkinson's disease; dementia; short memory; cancer; sense or motor function; emotional reaction; fear response; panic; osteopathic; neuroprotective; nootropic; antiparkinsonian; cytostatic; Ë GGGGTATCATCTTTGCCAACGAGGATGACA---TCAGGGTTCGACCGATACTTCTCC Otsuki protein useful for treating neurological disease Seg 2129. Isono Y, Sugiyama T, 591 8 8 1 1 Length:
Matches:
Conservative:
Mismatches: Nishikawa T, Ison Nagai K, Irie R; Claim 1; SEQ ID NO 2129; 2686pp; English. US-10-828-332-6 (1-1755) x ADR08623 (1-591) (REAS-) RES ASSOC BIOTECHNOLOGY 14-FEB-2003; 2003JP-00102207. 09-MAY-2003; 2003JP-00131452. 1,19e-202 2912:50 97.53% 96.12% 88.18% 12-FEB-2004; 2004EP-00003145. Isogai T, Yamamoto J, Wakamatsu A, Ishii S, WPI; 2004-583265/57. Percent Similarity: Best Local Similarity: N-PSDB; ADR06667 591 AA; Homo sapiens tranquiliser EP1447413-A2 Alignment Scores: 18-AUG-2004. Sequence 7 64 42 Best Local Sir Query Match: DB: Human g ò ઢ

ેં

8 8 8 8

8 6 8 6 8 8 8

			• 4	
17TCCATTGCAAGTTGCACCCCCCCCCCCCCAAGAAGCCACCACACACA	24 TTCCATTGCAAGTTGAAGCGCCACGCGCTCAAGAAGGGAAGCCAATCAAGAAGTGCACC		### ### ##############################	Jeunidilyllepheleucystyralaintrintpheleumetilealagiuprohappleu Jall GGGACCTGTCGCCCCCTCCTAGGGCTCGCATGAGCATCAGCTACGCGCC 102. 342 GlyThrCysSerLeuhrgargliepheLeudlyLeudlyMetSerileSerTyrAlaala 361. 354 GGCTGACCCAACCGCATTTACCGCATCTTGAGGAGGCAAACGGTCGGT

6 8 6 8 6 8 6 8 6

8 4 8 4 8 8 8

8686

1323 1383 1384 ACCATGTACACCACCTGCATTGTCTGGCTGGCCTTCATCCCCATCTTTTTGGCACCTCA 1443 1444 CAGTCAGCCGACAAGCTGTACATCCAGACAACCACACCACGGTCTCCGTGAGTCTGAGC 1503
502 GInSerAlaAspLysLeuTyrIleGInThrThrThrLeuThrValSerValSerLeuSer 521 GAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACCGCCGCCCACG 1623 461 1264 1564 542 ద දි දි 86868686 ò 음 상 g ò 셤

Search completed: June 17, 2005, 18:40:29 Job time: 307 secs

1his Page Blank (uspto)

Tetraodon 602373277 603604634

Tetraodon 603217533 Tetraodon

56040124H

Mus muscu UI-E-EJO-

BU456417 AL326057 CE724887 BE207131 AL290739 AK034263 BM61239 CM468842 CB517356 BGG06878 CD609656

암

Tetraodon

88alrgb53 2042-42 M

Mus muscu

٥,

OM nucleic

Run on:

Sequence:

88

Minimum I Maximum I

Database

Result

```
Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected CDNAs to prepare full-length CDNA libraries for rapid discovery of new genes Genome Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                            AK038395

Mus musculus adult male hypothalamus CDNA, RIKEN full-length enriched library, clone:A230002004 product:METABOTROPIC GLUTAMATE RECEPTOR 8 PRECURSOR, full insert sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., wuramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y., RIKEN integrated sequence analysis (RISA) system--384-format Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     he RIKEN Genome Exploration Research Group Phase II Team and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The FANTOM Consortium and the RIKEN Genome Exploration Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FANTOM Consortium. Function of a full-length mouse cDNA collection Nature 409, 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Carninci, P. and Hayashizaki, Y. High-efficiency full-length cDNA cloning Meth. Enzymol. 303, 19-44 (1999) 99279253
                                                                                                                                                                                                                                                                                              ALIGNMENTS
                                                CNSO2JYY
BG261524
BG261524
CNSO2BBY
CNSO54KQ
BU456417
CNSO56KW
CE724897
BE207131
CNSO4HBU
AKO34267
BM681239
CN668678
BG606878
CCO5220
CO602520
                                                                                                                                                                                                                                                                                                                                                                                                                                        HTC; CAP trapper.
Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                            GI:26086504
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                AK038395
AK038395.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .0349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11042159
                                     341.8
3340.8
334.4
328.6
3122.2
3115.2
3115.2
302.2
302.2
                                                                                                                                                                                                      294.4
290.4
285.6
284.8
                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PUBMED
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                   RESULT 1
AK038395
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
 June 21, 2005, 04:06:08; Search time 5983 Seconds (without alignments) 11165.434 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AU296039
Tetraodon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus muscu
Mus muscu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus muscu
Homo sapi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AK038395 Mus muscu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus muscu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            pgp2n.pk0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SB02040B2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ното варі
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            trog
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     UI -M-GMO-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       UI-M-EQO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BP359939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 UI-M-HBO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                 atgccaggggtatcatcatc......acaccaaccatgccatctag 1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Рап
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BC051384 AY401210 NBC034118 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AY401208 AY406145 AY406145 AY406143 AX605147 AX605147 AY406144 CD353576 CD353576 GX717163 BP359939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AL306790
BI732193
BM490671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AL311439
BU205182
CN460548
CX314839
BX873944
BM964289
                                                                                                                                                                                                                                                        68479088
             5.1.6
Compugen Ltd.
                                                                                                                                                                                                                               34239544 seqs, 19032134700 residues
                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
             version :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUMMARIES
                                                                                                                                                                                                                                                                                                                      Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                             nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AY406145
AY406143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AK053447
AY401209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BI732193
BM490671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BU205182
CN460548
CK314839
BX873944
BM964289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AY406144
CD353576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BP359939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CNS04TPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CNS04XAU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CN409312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AU296039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CR717163
                                                                                                                                                                                                      Gapop 10.0 , Gapext 1.0
             GenCore
Copyright (c) 1993
                                                                                                                                                                                                                                                                                   length: 0
length: 2000000000
                                                                                                                                       US-10-828-332-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length DB
                                                                                                                                                                                                                                                                                                                                                                                         gb_est1:*
gb_est2:*
                                                                                                                                                                                                                                                                                                                                                                                                                9b_htc...
9b_eat3...
9b_eat4...
9b_eat6...
9b_9aa1...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3693
3399
3399
2748
2667
2671
2671
2671
782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            653
1484
582
1051
787
608
1101
678
                                                                                                                                                                                           IDENTITY NUC
                                                                                                                                                                                                                                                                                                                                                                            EST:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query
Match
                                                                                                                                                                                                                                                                                                                         Post-processing:
                                                                                                                                                                                                                                                                                   Beg
Beg
                                                                                                                                                    Perfect score:
                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   841.4
823.2
822.6
807.2
806.2
801
793.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              579
531.2
503
4497.2
4440.6
4440.6
416.2
416.2
368.6
368.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  708
```

582

642

2040

2100

702

2160

762

2220

822

2280

882

2340 1002 2400 1062 2460 1122

942

```
2701 crearcercarreracrerrareccarraaaaccaeaeeerrcaeaaacerrcaaaa
  1681 ATGCACAAAGAACTCTGCCCTGGTTACATAGGCCTTTGCCCAAGGATGGTTACCATCGAT 1740
                                                                                                                                                                 1861 AACAACAAAAGTACAGAATACAAAATCATCGGCCACTGGACCAATCAACTTCACCTAAAA 1920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGCATTCACCCTGGCGGCGTGCTACTTCATAGCAATATTGGGAATCATTGCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2281 CGGGAACTTAGTTATGTGCTCCTAACGGGGATTTTTCTCTGTTACTCAATCACTTTTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Grecreagrereacarricegarererecerearrightee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2761 GAAGCCAAACCTATTGGATTTACCATGTACACCACGTGCATCATTTGGTTAGCTTTCATT
                                                                                                                                                                                                                                                                                                                                       Gregaagacarecagregecraaradagagcaccccaccagcarcrercrecocce
                                                                                                                                                                                                                                                                                                                                                                                                      GAGCCCTGCACCGGGTACCAGTGGACCGCTACACCTGTAAGACCTGCCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2041 GAACGCTGCGAGGGTTATAACTACCAGGTGGACGAACTCTCCTGTGAACTCTGCCTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            763 TGGGACTCGCCGTGGCCGTGCTCCTCTTCCTGGCCGTGGTGGCCATCGCCGCCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGAGCATCAGCTACGCGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2461 CAAGGGAAGAATCTGTCACAGCACCTAAGTTCATCAGCCCAGCATCCACCAGCTGGTGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2521 ACCTTCAGCCTCATCTCCGTACAGCTCCTTGGAGTGTTTGTGTGGGTTTTGTCGTGGATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1183 TCCCACTCGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCCGCTTTGCCCAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ceccacaccarcarreacrareasasacaccascascaccacarcecasasasases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGAAAGAGCTACTGGGTTACATCAGGGCCGTGAATTTTAATGGCAGCGCTGGTACACCT
                                                                                                                            GTAACCTTCAATGAGAACGGAGACGCACCGGGGCGCTACGACATCTACCAGTACCAACTG
                                                                                                                                                                                                                                                                                                ATAGAGCGGATGCCAGTGGCCAGGAGTGGCCAGCAGCTGCCGCGCTCCCATCTGCAGTCTG
                                                                                                                                                                                                                                                                                                                                                                                  CCCTGCCAGCCCGGGGAGCGAAAGAAGACTGTGAAGGGCATGGCTTGCTGCTGGCACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GACATGCGGCCCACAGAGAACGCCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGTTCGTGGTCGCGTTTGTGCGCTACAACGATACCCCCCATCGTCAAGGCCTCGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGAACTGAGCTACGTGCTGCCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGATCGCAGAGCCGGACCTGGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2341 Argarrecescacereacearcarcarcrecretriceaaeaarcriceresearcree
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCTICATCCTCATCTCCCTGCAGCTGCTCGGCATCTGCGTGGTTCGTGGTGGACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGCTCAAGTGCGACATCTCGGACCTGTCCCTCATCTGCCTGGGCTACAGCATGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAAC
                                             GGCACCCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCT
                                                                                                                                                                                                               CGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCCACCTGCACCTCAGA
                                                                                                                                                                        1801
                                                                                                                                                                                                                                                                                                                                       1921
                                                                                                                                                                                                                                                                                                                                                                                                                            1981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1363
                                             343
                                                                                                                              403
                                                                                                                                                                                                                 463
                                                                                                                                                                                                                                                                                                                                                                                  583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2641
                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                          g
                                                                                                                                                                                                                                                8 è
                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                             8 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  원 상
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
                              ò
                                                                                                                            ò
                                                                                                                                                             g
                                                                                                                                                                                                  ò
Group Phase I & II Team.

Analysis of the mouse transcriptome based on functional annotation of 60,700 full-length cDNAs

Lof 60,700 full-length cDNAs

Nature 420, 563-573 (2002)

E (Dases I to 3675)

Adachi,J., Alzawa,K., Akimura,T., Arakawa,T., Bono,H., Carninci,P., Fukuda,S., Furuno,M., Hangaki,T., Hara,A., Hashizume,W.,

Hayashida,K., Hayatsu,N., Hiramoto,K., Hiraoka,T., Hirozane,T.,

Hori,F., Inoranai,K., Ishii,Y., Itoh,M., Kagau,A., Kasukwa,T.,

Katoh,H., Kawai,J., Kojima,Y., Kondo,S., Konno,H., Kouda,M.,

Nakamura,M., Noishi,K., Nomura,K., Numazaki,R., Ohno,M., Ohsato,N.,

Okazaki,Y., Saito,, Shibate,K., Shinagawa,A., Shiraki,T.,

Sogabe,Y., Tangami,M., Tagawa,A., Takahashi,F., Takaku-Akahira,S.,

Takeda,Y., Tanaka,T., Tomaru,A., Toya,T., Yasunishi,A.,

Muramatsu,M. and Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                              Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.jp, URL:http://genome.gsc.riken.jp/, Tel:81-45-503-9222,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     dadgaaadgircaaitigiatigiaatigateegigiaticeateectiateeacteeacaeae 1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 enriched mouse cDNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="METABOTROPIC GLUTAMATE RECEPTOR 8 PRECURSOR (SWISSPROT|P47743, evidence: FASTY, 97.2%ID, 100%length, match=2780)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             deadartricegaedagartriceardeaartraceareacareacarede---aadaedaac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAGCGCAACATCTGGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGGGCTCAAGAAGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCCATGGGCCACGCGCTGCACGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCCGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ٠.
ش
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 841.4; DB 3; Length 3675;
Pred. No. 2e-184;
0; Mismatches 501; Indels 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         visit our web site for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="FANTOM DB:A230002004"
/db_xref="taxon:I0090"
/clone="A230002004"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissue type="hypothalamus"
/clone lib="RIKEN full-length
/dev_stage="adult"
1...3675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Mus musculus"
/mol_type="mRNA"
/strain="C57BL/63"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               prepare mouse tissues.
Please visit our web site for fu
URL:http://genome.gsc.riken.jp/
URL:http://fantom.gsc.riken.jp/
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 69.6%;
Matches 1155; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .3675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               283
                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
                                                                                       REFERENCE
AUTHORS
                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
```

1182

2580

1242

셤 ò 원 ઠે 셤 ò 셤 ò

ò

1302 2700

셤

유

ઠે

요

ઠે g ઠે

ઠે

```
Gaithersburg, Maryland;
Web site: http://www.nisc.nih.gov/
Contact: nisc mgc@nbgi.nih.gov
Akhter, N., Ayele, K., Beckstrom-Sternberg, S.M., Benjamin, B.,
Blakealey, R.W., Bouffard, G.G., Breen, K., Brinkley, C., Brooks, S.,
Blakealey, R.W., Bouffard, G.G., Breen, K., Brinkley, C., Brooks, S.,
Blakealey, R.W., Granite, S., Guan, X., Gupte, J., Haghighi, P.,
Hansen, N., Ho, S.-L., Karling, E., Kwong, P., Laric, P., Legaspi, R.,
Madowell, J., Maskeri, B., Mastrian, S.D., McCloskey, J.C.,
McDowell, J., Pearson, R., Stantripop, S., Thomas, P.J., Touchman, J.W.,
Young, A., Zhang, L.-H. and Green, B.D.
                                                                                                                                                                                                                                                                                                                                          Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LINL at: http://image.llnl.gov Series: IRAK Plate: 100 Row: j Column: 8 This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 6680104 This clone has the following problem: frame shifted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1450 GCAGAATTTTGGGAGGAGTTTTGGATGCAAATTAGGATCACATGGG---AAGAGGAAC 1506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1807 AACAACAAAAGTACAGAATACAAAATCATCGGCCACTGGACCAATCAACTTCACCTAAAA 1866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGTCATATAAAGAAATGCACAGGGCTGGAGCGAATTGCACGGGATTCATCTTACGAACAA 1566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAAGGAAAGGTTCAATTTGTAATTGATGCAGTGTATTCCATGGCTTATGCACTGCACAAC 1626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1627 Argeacaaagaacrergecergerracaraggeerrrigeeeaaggargerracearear 1686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1687 GGGAAAGAĞCTACTGGGTTACATCAĞGGCCĞTGAATTTTAATĞGCAGCĞCTĞĞTACACCT 1746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1747 Greactititaargagaarggagargereeggaegeeracgaratereeaarareagara 1806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1867 Grociagacariscacriosceraaracacacacacacacacarererereres 1926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1927 CCGTGCAAGCCTGGGGAGGAAGAAAACCGTGAAAGGGGTCCCTTGCTGCTGGCACTGT 1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCTGCCAGCCCGGGAGGGGAAAGAAGAAGACTGTGAAGGGCATGGCTTGCTGCTGCACTGC 642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTAACCTTCAATGAGAACGGAGACGCACCGGGGCGCTACGACATCTACCAGTACCAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAACACGCGCAACATCTGGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCCACCTGCACTCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATAGAGCGCATGCAGTGCCCAGGGAGTGCCCAGCAGCTGCCGCGCTCCATCTGCAGTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /tissue type="Eye, retina, mouse strain C57Bl\6"
/clone lib="NIH MGC_94"
/lab host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 841.4; DB 3; Length 3693;
Pred. No. 2e-184;
); Mismatches 501; Indels 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'note="Vector: pCMV-SPORT6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /mol_type="mRNA"
/db_xref="taxon:10090"
/clone="IMAGE:6466902"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 69.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 1155; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 쉱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Straubberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Altschulk, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Wang, J., Hsieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Staplecon, M., Soares, W.M. B., Bonaldo, M.F., Casavant, T.L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Abramson, R.D., Mullahy, S.J., Boask, S.A., McEwant, P.L.,
McKernan, K.J., Mallah, S.S., Loquellano, N.A., Peters, G.J.,
Morley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,
Villalon, D.K., Malk, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,
Fahey, J., Helton, E., Ketteman, M., Modan, A., Schwetchenko, Y.,
Butkeley, M., Madan, A., Young, A.C., Shevchenko, Y.,
Butkeley, W., Touchman, J.W., Green, E.D.,
Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,
Generation and initial analysis of more than 15,000 full-length
human and mouse cDNA sequences
L. Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
                                                                                                                                              1542
                                                                                                                                                                                  2881 ACTGTCTCCATGAGTTTAAGTGCTTCAGTGTCTCTGGGAATGCTCTATATGCCCAAAGTT 2940
                                                                                                                                                                                                                                                                                          2821 CCCATCTTTTTGGTACAGCCCAGTCAGCAGAAAAGATGTACATCCAGACAACAACACTT 2880
                                                                                                                                                                                                                                                             TACATCATCCTCTTCCACCCGGAGCAGACGTGCCCAAGCGCAAGCGCAAGTCTCAAAGCC 1602
                                                                                                                                                                                                                                                                                                                                                                           GTGGTCACCGCCCCCCACCATGTCCAACAGTTCACAGAGGGCAACTTCAGGCCCAAT 1662
                                                                                                                                                                                                                                                                                                                                                                                                               3001 GTGGTCACGGCCGCTACCATGCAAAGCAAACTGATCCAAAAAGGGAAATGACAGACCAAAC 3060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HTC .19-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
1 (bases 1 to 3693)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus glutamate receptor, metabotropic 8, mRNA (cDNA clone IMAGE:6466902), containing frame-shift errors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Direct Submission
Submitted (25-APR-2003) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                              ACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: cgapbs-r@mail.nih.gov
Tissue Procurement: The Cepko Laboratory
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: National Institutes of Health Intramural
Sequencing Center (NISC),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3061 GGCGAGGTGAAAGTGAACTCTGTGAGAGTCTTGAAACC 3099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1663 GGGGAAGCCAAATCAGAGCTGTGTGAGAACCTGGAGACC 1701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3693 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (house mouse)
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BC051384.1 GI:30410848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 (bases 1 to 3693)
Strausberg, R.
                                                                                                                                                                                                                                                                                                                  2941
                                                                                                                                           1483
                                                                                                                                                                                                                                                             1543
                                                                                                                                                                                                                                                                                                                                                                              1603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 2
BC051384
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REMARK
COMMENT
```

1449

402

TITLE

462

q

ò

8 &

a

```
GSS 15-DEC-2003
sequence,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1332 gescanganstrictricanstraticescanterranctricantestastectes 1391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCACGCGTGCACGC 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           402 TGTAACCTTCAATGAGAACGGAGGCGCACCGGGGGCGCTACGACATCTACCAGTACCA--- 458
                                                                                                                                                                               Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria; Rodentia, Sciurognathi, Muridae, Murinae, Mus. I basea I to 2748)
Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B., Reritara, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M. White, T.J., Sninsky, J.J., Inferring nonneutral evolution from human-chimp-mouse orthologous
                                                                                                                                                                                                                                                                                                                                                                                  Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Clark, A.G., Glanowski, S., Nielson, R., Tu, F., Murphy, B., Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B., Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Shinsky, J.J., Adams, M.D. and Cargill, M. Direct Submission

Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive, Rockville, MD 20850, USA
This sequence was made by sequencing genomic exons and ordering them based on alignment.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1092 TGCCGAATACTGGGAAGAAAACTTCAACTGCAAGTTGACAATTAGTGGATCCAAAAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       102 TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCCACGCGCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              282 CATGCACCGTGACCTGTGTCCCGGCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      162 AAGCCACATCAAGAAGTGCACCAACCGAGGCGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        342 TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACACAGGCGCAACATCTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 2748;
                                      DNA linear
TRANSCRIPT, partial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 823.2; DB 9;
Pred. No. 3.2e-180;
); Mismatches 548;
                                                                                                                                                                                                                                                                                                                                                     Science 302 (5652), 1960-1963 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .2748
/organism="Mus musculus"
/mol_type="genomic DNA"
/db_xref="taxon:10090"
                                    2748 bp
VIRTUAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /gene="GRM7"
/locus_tag="HCM0814"
                                                                                                                                             Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             · ·
                                                                          genomic survey sequence
                                                                                                        AY401210.1 GI:39757199 GSS.
                                      AY401210
Mus musculus GRM7 gene,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 67.9%;
Matches 1165; Conservative
                                                                                                                                                                                                                                                                                                                                      gene trios
                                                                                                                                                                                                                                                                                                                                                                      14671302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
RESULT 3
AY401210
LOCUS
DEFINITION
                                                                                         ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                     JOURNAL
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                      1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2946
                                                                                                                                                                                                                                                             2226
                                                                                                                                                                                                                                                                                                                                    2286
                                                                                                                                                                                                                                                                                                                                                                                                           2346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Argrerrrchischargeageactrrrchichaaacaaaccarcerreceararreang 2406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCCACTCGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGGC 1242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACTGICTCCATGAGTITAAGTGCTICAGTGICTCTGGGAATGCTCTATATGCCCAAAGTI 2886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTGGTCACCGCCGCCACCATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAAT 1662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gregicaceccecraccarecaagcaaacrearccaaaageaaareacadaccaaac 3006
                                                                                                                                                  822
                                                                                                                                                                                                                                                                                                942
                        GAACGCTGCGAGGGTTATAACTACCAGGTGGACGAACTCTCCTGTGAACTCTGCCCTTTG
                                                                                               ACCTTTGTGATTGTGACCTTTGTCGCTATAATGACACACCAATCGTGAGAGCTTCTGGG
                                                                                                                                                                                                                                                                                                                   CAAGGGAAGAAATCTGTCACAGCACCTAAGTTCATCAGCCCAGCATCGCAGCTGGTGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCTTCAGCCTCATCTCCGTACAGCTCCTTGAGTGTTTGTGTGGGTTTGTCGTGGATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGCTCAAGTGTGACATTTCCGATCTGTCACTCATTTGTTCACTGGGATACAGTATCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGATGGTCACTTGTACTGTTTATGCCATTAAAACCAGAGGGGTTCCAGAAACGTTCAAT
   GAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCTAC
                                                                          GACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGAG
                                                                                                                                                  rescarreacecresecerecrerererrerraceanarressaarcarreceace
                                                                                                                                                                                                                           CTGTTCGTGGTCACGTTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGC
                                                                                                                                                                                                                                                                                                  CGGGAACTGAGCTACGTGCTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTC
                                                                                                                                                                                                                                                                                                                                                                        ATGATCGCAGAGCCGGACCTGGGGCTCCGCCGCCATCTTCCTAGGGCTCGGC
                                                                                                                                                                                                                                                                                                                                                                                                         ATGAGCATCAGCTACGCGGCCCTGACCAAGACCAACCGCATTTACCGCATCTTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGGGCAAACGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCTTCATCCTCATCTCCCTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGTGGTGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAAGCCAAACCTATTGGATTTACCATGTACACCAGGTGCATCATTTGGTTAGCTTTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCCATCTTTTGGCACCTCACAGTCAGCGACAAGCTGTACATCCAGACAACCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cccarctrrrrggracagccagrcagaaaaaaargracarcagacaacaacarcrr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2887 TATATTATATTTTTCATCCAGAGCAGAACGTTCAAAAACGCAAGAGAAGTTCAAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGGAAGCCAAATCAGAGCTGTGTGAGAACCTGGAGACC 1701
                                        1987
                                                                                                                2047
                                                                                                                                                                                                                           823
                                                                                                                                                                                                                                                                                                                                                                          943
                                                                                                                                                                                                                                                                                                                                                                                                             2287
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3007
                                                                                                                                                                                       2107
                                                                                                                                                                                                                                                               2167
                                                                                                                                                                                                                                                                                                    883
                                                                                                                                                                                                                                                                                                                                      2227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1603
                                                                            703
                                                                                                                                                  763
```

 8 8

ઠે

```
numan and mouse cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 3399)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       trausberg, R.
1539
                                             1599
                                                                                            1659
                                                                                                                                                                  2712
                                                                                                                                                                                                                                                               ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                      RESULT 4
BC034118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REMARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                 යු
                                             ઠ
                                                              ద
                                                                                            ŝ
                                                                                                                 g
                                                                                                                                          ઠે
                                                                                                                                                              g
                                 1511
                                                                                                                               1631
                                                                                                                                                                                                                                                                           1811
                                                                                                                                                                                                                                                                                                                                                                                                                                                1058
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1992 GGGTATGTGTTTATTATGCAGCCCTTTTTAACAAAACCAATCGGATTTATCGCATATT 2051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2411
                                                                                                                                                                               1691
                                                                                                                                                                                                                             1751
                                                                                                                                                                                                                                                                                                                 1872 TGGGGGGAACTCAGCTATGTTTATTGACAGGCATCTTTCTCTGCTATATCATCGTT 1931
                                                                                                                                                                                                                                                                                                                                                                                                             2052 CGAGCAGGGGAAAGAATCGGTGACAGCTCCAGACTCATAAGCCCAACATCACAACTGGC 2111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1119 CATCACCTTCATCCTCATCTCCCTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGT 1178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1179 CCCCTCCCACTCGGTGGACTTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCAG 1238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CATCCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCAC 1478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2531
                                                                                                       638
                                                                                                                                                       869
                                                                                                                                                                                                     758
                                                                                                                                                                                                                                                     818
                                                                                                                                                                                                                                                                                                    878
                                                                                                                                                                                                                                                                                                                                                   938
                                                                                                                                                                                                                                                                                                                                                                                                 966
                                                                        CAATATAGAGGACATGCAGTGGGGCAAAGGAGTCCGGGGAGATCCCACCCTCTGTGTGCAC
                                                                                                                     1572, ATTGCCATGCAAGCTGGGCAGAAGAAGAAGACACAGAAGGGAACGCCTTGCTGCTGGTGAC
                                                                                                                                                                   1752 GGAGTGGCACTCACCTGGGCTGTCATTCCTGTCTTCCTGGCAATGTTGGGGATCATTGC
                       CAGAATAGAGCGGATGCAGTGGCCAGGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAG
                                                                                                      579 TCTGCCCTGCCAGCCCGGGGAAGGAAGAAGACTGTGAAGGGCATGGCTTGCTGCTGCCA
                                                                                                                                                       CTGCGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCC
                                                                                                                                                                                                                                                  CACGCTGTTCGTGGTCACGTTTGTGCGCTACAACGATACCCCCCATCGTCAAGGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2472 GCTTACAATCTCCATGAACCTAAGTGCATCAGTGGCGCTGGGGATGCTATACATGCCGAA
          ACTGCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCT
                                                                                                                                                                                                     CTACGACATGCGGCCCACAGAGAACCGCACGAGGTGCCAGCCCATCCCCATCGTCAAGTT
                                                                                                                                                                                                                            CTATGACCAGAGCCCAATGAGAACCGAACAGCTGTCAGAACATCCCAATCATCAAACT
                                                                                                                                                                                                                                                                                                                                                   GGGCCGGGAACTGAGCTACGTGCTGCTGCGGGCATCTTTCTGTGCTACGCCACTACCTT
                                                                                                                                                                                                                                                                                                                                                                                                CCTCATGATCGCAGAGCCGGACCTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                               999 CGGCATGAGCATCAGCTACGCGGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1059 TGAGCAGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2112 AATTACCTCCAGTTTAATATCGGTGCAACTTCTAGGTGTCTTTATTTGGTTTGGGGTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1299 GCTGCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2292 TCTTCTCATGTCACATGTACTGTATGCCATCAAGACTCGGGGTGTACCAGAGAATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTGACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAA
                               1452
                                                       519
                                                                              1512
                                                                                                                                                      639
                                                                                                                                                                                                                            1692
                                                                                                                                                                                                     669
                                                                                                                                                                                                                                                   759
          459
                                                                                                                                                                                                                                                                                                   819
                                                                                                                                                                                                                                                                                                                                                   879
                                                                                                                                                                                                                                                                                                                                                                                                 939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2232
          ઠે
                                                    ઠે
                                                                         셤
                                                                                                                                                                                                                                                                      유
                                                                                                     ઠે
                                                                                                                        셤
                                                                                                                                                   δ
                                                                                                                                                                        셤
                                                                                                                                                                                                    8 6
                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                 요
                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 පු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>а</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ሯ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
```

```
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 3399)
Strausberg, R.L., Feingold, B.A., Grouse, L.H., Derge, J.G., Klausner, R.D., Collins, F.S., Wagner, L., Schemen, C.M., Schuler, G.D., Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhac, N.K., Hopkins, R.F., Jordan, H., Moore, T., Max, S. I., Wang, J., Hsieh, F., Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hongi, L., Scheetz, T.E., Brownstein, M.J., Uddin, T.B., Toshiyuki, S., Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J., Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J., McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S., Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W., Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A., Bouffard, G.G., Blakesley, R.W., Touchman, A., Roden, E.D., Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Wyers, R.D., Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Samilus, D.E., Schnerch, A., Schein, J.E., Onnes, S.J. and Marra, M.A., M. M. Manny, D.M., Romoston, M.C., Rowolley, R.C., Grimwood, J., Schmutz, J., Myers, R., Schein, J.E., Schein, J.E., Schent, M. J., Schein, J.E., J., Schein, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BCU34118
Mus musculus glutamate receptor, metabotropic 6, mRNA (cDNA clone BC034118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Genome
CA 94305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: MGC help deak
Email: cgapba-r@mail.nih.gov
Tissue Procurement: The Cepko Laboratory
CDNA Library Arrayed by: The I'M.A.G.E. Consortium (LLNL)
DNA Sequencing Broug at the Stanford Human Genome
Center, Stanford University School of Medicine, Stanford, CA 943
Web site: http://www-shgc.stanford.edu
Contact: (Dickson, Mark) mcd@paxil.stanford.edu
Dickson, M., Schmutz, J., Grimwood, J., Rodriquez, A., and Myers,
R. M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Direct Submission
Submitted (02-071-2002) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
2532 AGTGTACATCATCATCATTTTCCACCCTGAACTCAATGTCCAGAAACGGAAGCGAAGCTTCAA
                                                                                                                                                                                                                                                                          2592 GGCCGTAGTCACAGCCACCATGTCATCGAGGCTGTCACACAAACCCAGTGACAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2652 CAATGGTGAGGCAAAGACAGAACTTTGTGAAAATGTAGACCCAAACAGCCCTGCTGCAAA
                                                                                                                                                                                                                                                                                                                                                                                     CAATGGGGAAGCCAAATCAGAGCTGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAA
                                                                                                                                                                      Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
22388257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAAGAAGTATGTCAGTTATAATAACCTGGTTATCTA 2747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1719 ACAGACCTACGTCACCTACACCAACCATGCCATCTA 1754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NIH-MGC Project URL: http://mgc.nci.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             веспепсев
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (house mouse)
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BC034118.1 GI:21706621
```

```
1180
                                                                                                                                                                                                                                                                                                                                        1300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1660
                                                                                                              1060
                                                                                                                                                                                                 1053
                                                                                                                                                                                                                                                         1113
                                                                                                                                                                                                                                                                                   1240
                                                                                                                                                                                                                                                                                                              1173
                                                                                                                                                                                                                                                                                                                                                                      1233
                                                                                                                                                                                                                                                                                                                                                                                                 1360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GSS 15-DEC-2003 sequence,
  CGCCTGACCTGGTCCTCTCCGTGGGCCGCTCTGCCCCTTCTCTCTGGCTGTCCTGGGCATC 940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (human)
Homo sapiens
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Bukaryota; Metazoa; Chordate; Catarrhini; Hominidae; Homo.
1 (bases 1 to 2748)
Clark,A.G., Glanowski,S., Nielson,R., Thomas,P., Kejariwal,A.,
                                                                                                  GCCTCTGGCCGTGAGCTTAGCTATGTGCTGCTCACGGCATCTTCCTGATCTACGTCATC
                                                                                                                                                                                                                                                                                                                                                                                             GCCCAACCTCCACACAGCGTGATTGACTATGAGGAACAGAGGACGGTGGACCCTGAGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCAGGGGTGTGTCTCAAGTGTGACATGTCTGATCTGTCCCTCATTGGCTGCCTGGGGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 941 ATGGCCACCACAACTATCATTGCTACCTTCATGCGACACAACGACACTCCCATAGTCCGC
                                                                                   1061 ACCTTCCTCATGGTAGCCGAGCCTTGTGCAGCCGTCTGTGCTTCCCGAAGACTCTTGCTC
                                                                                                                                                                                                                 CTGGCCATCACCTTCATCCTCCTTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTG
                                                                                                                                                                                                                                                                                                                            GTGGACCCCTCCCACTCGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCGGCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                            1481 ACCTICAATGAAGCCAAGCCCATCGCCTTCACCATGTACACCACCTGTATTATCTGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCTTCATCCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCACACTGACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCAAAGTCTACATCCTCCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCGCCACGCTGTTCGTGGTGGTCGTCTTGTGCGCTACAACGATACCCCCCATCGTCAAG
                                                                                                                                            ACCTICCICATGATCGCAGAGCCGGACCTGGGGGACCTGTTCGCTCCGCCGCCATCTTCCTA
                                                                                                                                                                                                 GGGCTCGGCATGAGCATCAGCTACGCGCCCTGCTGACCAAGACCAACCGCATTTACCGC
                                                                                                                                                                                                                                                          ATCTTTGAGCAGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA linear
TRANSCRIPT, partial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTCAAAGCCGTGGTCACCGCCGCCACCATGTCCAACA 1630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCAAGAAGACCTCCACGATGGCGGCCCCGCCCAAGA 1757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Home sapiens GRM7 gene, VIRTUAL genemic survey sequence.
AY401208
AY401208.1 GI:39757197
                                                                                                                 1001
                                                                                                                                                                                                                                                          1054
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1594
                                                                                      874
                                                                                                                                            934
                                                                                                                                                                                                    994
                                                                                                                                                                                                                             1121
                                                                                                                                                                                                                                                                                                                 1114
                                                                                                                                                                                                                                                                                                                                                                       1174
                                                                                                                                                                                                                                                                                                                                                                                                   1301
                                                                                                                                                                                                                                                                                                                                                                                                                             1234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 5
AY401208
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                   8686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    요
                                                   g
                                                                                                           g
                                                                                                                                                                  유
                                                                                                                                                                                                                    원
                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                    ઠે
                                                                                     8
                                                                                                                                    õ
                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LINL at: http://image.llnl.gov Series: IRAK Plate: 44 Row: i Column: 22
This clone was selected for full length sequencing because it passed the following selection criteria: Hexamer frequency ORF analysis
                                                                                                                                                                                                                                                                                                                              102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             820
                                                                                                                                                                                                                                                                                                                                                                                                                  280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGCCGGACCCTGCTGCACTACATCCGAGCAGTCCGCTTCAATGGTAGCGCAGGAACCCCA 520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 813
                                                                                                                                                                                                                                                                                                                                                                                      GCCGAGTTCTGGGAGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGA 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGATTTGACCAATACTTTATGACTCGTTCCCTGGAGAACAACGCGAGAAACATCTGGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGACTGGATATGGAAGCTCTACAGTGGTCAGGGGACCCCCATGAGGTGCCCCCTTCTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACACAGGCGCAACATCTGGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GATTCCACCCGGAAATGCACAGGAGGAACGCATCGGCCAGGACTCCACCTATGAACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGGGGAAGGTGCAGTATTGACGCTGTGTACGCCATGGGCCAGGCGCTGCACGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTAACCTTCAATGAGAACGGAGGGCACCGGGGCGCTACGACATCTACCAGTACCAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGCAATG------GCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          581 ACCAATGGAAGTGCCAGCAGTGGCGGTACCAGGCTGTGGGCCAATGGGCAGAGGCCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CACCTCAGAATAGAGCGGATGCCAGGGGAGTGGCCAGCAGCTGCCGCGCTCCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCAGTCTGCCCTGCCAGCCCGGGGAGCGAAAGAAGACTGTGAAGGGCATGGCTTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       recaeccrecereresecrassasasasasasasasasasasasasasasasecerecererer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGGCACTGCGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGTTGGAGTGGCGTGGGCCGTGCTGCCCTCTTCCTGGCCGTGGTGCGCATC
                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                         /db_xref="taxon:10090"
/db_xref="taxon:10090"
/clone="tyAAGE:4511841"
/tissue_tyPe="Epy" retina, mouse strain C57Bl\6"
/clone=lib="NHH MGC_94"
/lab_host="DH10B"
/note="Vector: pCMV-SPORT6"
                                                                                                                                                                                                                                                                                                     6
                                                                                                                                                                                                                                                                         Length 3399;
                                                                                   This clone has the following problem: frame shifted.
Location/Qualifiers
1. .3399
/organism="Muss musculus"
                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                      Score 822.6; DB 3;
Pred. No. 4.6e-180;
0; Mismatches 467;
                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 70.2%;
Matches 1121; Conservative
                                                                                                                                                                                                                                                                                                                                                                                       103
                                                                                                                                                                                                                                                                                                                                                                                                                                             163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  754
                                                                                                                                                                                                                                                                                                                                 43
                                                                                                                                                                                                                                                                                                                                                           191
                                                                                                                                                                                                                                                                                                                                                                                                                  221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                761
                                                                                                     FEATURES
                                                                                                                                                                                                                                               ORIGIN
```

a

ઠ

ద

8

ò

g

മ്

δ

ò

a

a ઠે 셤 ઠે ద ò g ò a

ઠે

Q

ઠે

ð

요

ઠે

```
2111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2411
                                                                                                                                                                                                                                                                              1871
                                                                                                                                                                                                                                                                                                                                                                          1931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2711
                                                                                                                                          818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGTGAGCCTTGCGATGGTTACCAGTACCAGTTTGATGAGATGACATGCCAGCATTGCCC
                                                                             GAGTGGCACTCCCCCTGGGCTGTGATTCCTGTCTTCCTGGCAATGTTGGGGATCATTGC
                                                                                                                                                                                                                                                                    2112 AATCACTICCAGTTTAATATCAGTICAGCTTTTAGGGGTGTTTGGTTTTGGTGTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGTGGGACTCGCCGTGGCCGTGCCCCCTCTTCCTTGGCCGTGGTGGGCCATCGCCGC
                                                                                                                                                                                                                                    CACGCTGTTCGTGGTCACGTTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTC
                                                                                                                                                                                                                                                                                                                              GGGCCGGGAACTGAGCTACGTGCTGCTGCTGGCGGCATCTTTCTGTGCTACGCCACTACCTT
                                                                                                                                                                                                                                                                                                                                                                               cercargarreccaaaccagarerescagrerererrecescesceaerrrecescerr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2052 TGAGCAGGGCAAGAATCAGTAACAGCTCCCAGACTCATAAGCCCAACATCACAACTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTACGACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                           CCTCATGATCGCAGAGCCGGACCTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGCATGAGCATCAGCGGGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1992 GGGTATGTGCATCAGTTATGCAGCCCTCTTGACGAAAACAAATCGGATTTATCGCATATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGAGCAGGCCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATCACCTTCATCTTCATCTCCCTGCAGCTGCTCGCCATCTGCGTGTGGTTCGTGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCTGCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1479 ACTGACGGTCCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGTCTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGTGTACATCATCATTTTCCACCCTGAACTCAATGTCCAGAAACGGAAGCGAAGCTTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2592 GGCGGTAGTCACAGCCACCATGTCATCGAGGCTGTCACACAAACCCAGTGACAGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCTTCTCATGGTCACATGTACTGTGTATGCCATCAAGACTCGGGGTGTACCCGGGAAATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCCGTGGTCACCGCCCACCATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAATGGGGAAGCCAAATCAGAGCTGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           caacegreaegeaaagacegagerergreaaaaggragaeecaaacageecreergeaaa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACAGACCTACGTCACCTACACCAACCATGCCATCTA 1754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2712 AAAGAAGTATGTCAGTTATAATAACCTGGTTATCTA 2747
    1632
                                                                                              1692
                                                                                                                                                                                        1752
                                                                                                                                                                                                                                                                                1812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2652
                                                                                                                                          759
                                                                                                                                                                                                                                       819
                                                                                                                                                                                                                                                                                                                                 879
                                                                                                                                                                                                                                                                                                                                                                                                                             939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1719
                                                   669
                                    8 8 8
                                                                                                                                                                            g
                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                  ક
                                                                                                                                                                                                                                                                                                                                                                   ద
                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8 & 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ያ ያ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ያ ያ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1212 GGAGGGTAAAGTCCAGTTCGTGATTGACGCAGTCTATGCTATGGCTCACGCCCTTCACCA 1271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1272 cargaacaaggarcrcrgrgcrgacracggggrgrcrgcccagagarggaggaggrgc 1331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1512 caararadaaaacarecaeregegraaagaareceaagagaraeceeereagagaran
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1332 AGGCAAGAAGTTGCTGAAGTATATACGCAATGTTAATTTCAATGGTAGTGCTGGCACTCC 1391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1452 CACAAACACCAGCAACCCGGGTTACCGTCTGATCGGGCAGTGGACAGACGAACTTCAGCT 1511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              102 TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGC 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATGCACCGTGACCTGTGTCCCCGGCCGCTAGGACTCTGCCCTCGCATGGACCCCGTGGA 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGTAACCTTCAATGAGAACGGAGGCACCGGGGCGCTACGACATCTACCAGTACCA--- 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGAATAGAGCGGATGCCAGTGGCCAGGGAGTGGCCAGCAGCTGCCGCCCCCATCTGCAG 578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          579 TCTGCCCTGCCCAGCCCGGGGAGCGAAGAGTGTGAAGGGCATGGCTTGCTGCTGCTGGCA 638
                                                                    Inferring nonneutral evolution from human-chimp-mouse orthologous
                                                                                                                                                      The second of th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGCCACATCAAGAAGTGCACCAACCGAGGCGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGACACAGATCGCAAATGCACAGGACACAGAGAATTGGAAAAAGATTCCAACTATGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGCGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAACAACGACATCTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGCACCCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTGCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
Todd,M.A., Tanenbaum,D.M., Civello,D.R., Lu,F., Murphy,B.,
Ferriera,S., Wang,G., Zheng,X.H., White,T.J., Sninsky,J.J.,
Adams,M.D. and Cargill,M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ٠<u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 2748;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 46.0%; Score 807.2; DB 9; Best Local Similarity 67.3%; Pred. No. 1.7e-176; Matches 1155; Conservative 0; Mismatches 558;
                                                                                            gene trios
Science 302 (5652), 1960-1963 (2003)
14671302
                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <1, ... >2748
/gene="GRM7"
/locus_tag="HCM0814"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       639
                                                                                                                                                                                                                                                                                                                                                                                                                             Bource
                                                                                                                                        PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                              TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene
                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
```

요 ઠે ద δ g ઠે

ਨੇ

8 & 8

ያ ያ

ઠે g È

8 & 8

642

1788

822

1728

1848

942

882

1062 2028 1122 2088 1182 2148 1242

```
GAACGCTGCGAGGGTTATAACTACCAGGTGGAACTCTCCTGTGTGAACTCTGCCCTTTG 1668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ceseaactraerrarerectrarecesearriritereretractrareactririte 1908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGATGGTCACGTGTACTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAAC 1362
1375 GTCACTTTTAATGAGAATGGAGATGCTCCGGGACGCTACGATATCTTCCAATATCAGATA 1434
                                                                                                                                                                                          GAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTAC 702
                                                                                                                1729 TGGCATTCACCCTGGGGGGGGGGTGCTGTTCATAGCAATATTGGGAATCATGCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                           cccacaccatcattgactatgagaacagggaacactggatcccgagaacgccaggga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GIGCTCAAGTGTGACATTTCCGATCTGTCACTCATTTGTTCACTGGGATACAGTATCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAAGCCAAACCTATTGGATTTACCATGTACACCACGTGCATCATTTGGTTAGCTTTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1483 ACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTC  
2445 ACTGTCTCCATGAGTTTAAGTGCTTCAGTGTCTCTGGGAATGCTCTATATGCCCAAAGTT
                                                                                                                                                                                                                                                                                                                                                          <u> argarrecesceccreacaarcarcrecrerreceaagearcriceregeacrreer</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1969 ATGTGTTTCAGCTATGCAGCACTTTTGACCAAAACAAACGTATCCACCGAATATTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2089 ACCTICAGCCTCATCTCCGTACAGCTCCTTGGAGTGTTTGTGTGGTTGTCGTGGATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1183 TCCCACTCGCTGGACTTCCAGGACCAACGGACACTTGACCCCCCGCTTTGCCCAGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCATCTTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTG
                                                              1435 AACAACAAAAGTACAGAATACAAAATCATCGGCCACTGGACCAATCAACTTCAC----
                                                                                               ATAGAGCGGATGCCAGGCAGGGGGCCCAGCAGCTGCCGCCCCCCTCCATCTGCAGTCTG
                                                                                                                                                            GACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                          823 CTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCCATCGTCAAGGCCTCGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGAGCATCAGCTACGCGCCCTGACCAAGACCAACCGCATTTACCGCATCTTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGGGCAAACGGTCAGTGCCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCTTCATCCTCATCTCCCTGCAGCTGCTCGGCATCTGCGTGGTTCGTGGTGGACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2389 cccarcririridgracacccagicacaca---arcracarccagacaacaacar
                                 CGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAGA
                                                                                                                                                              583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1303
                                 463
                                                                                                                               1489
                                                                                                                                                                                              1549
                                                                                                                                                                                                                              643
                                                                                                                                                                                                                                                            1609
                                                                                                                                                                                                                                                                                             703
                                                                                                                                                                                                                                                                                                                            1669
                                                                                                                                                                                                                                                                                                                                                            763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>ک</u> ۾
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                  8 & 8
                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                8 è
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
 8 8
                                                         8 6 8
                                                                                                                                                    ⋧
                                                                                                                                                                                                                                                                                     상 점
                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1374
                                                               AY406145 2667 bp DNA linear GSS 15-DEC-2003
Mus musculus GRM8 gene, VIRTUAL TRANSCRIPT, partial sequence,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGA 162
                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (basea 1 to 2667); Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B., Rerifera, S., Wanog, G., Zheng, X.H., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M. Inderring nonneutral evolution from human-chimp-mouse orthologous
                                                                                                                                                                                                                                                                                                                                                                       Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B., Perriera, S., Wang, G., Zheng, X.H., White, T.J., Shinsky, J.J., Adams, M.D. and Cargill, M. Direct Submission

Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive, Rockville, MD 20850, USA

This sequence was made by sequencing genomic exons and ordering them based on alignment.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAACAACAACATCTGGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCCACATCAAGAAGTGCACCAACCGAGGCGCATCGGGCAGGACTCGGCCTATGAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGCACCGTGACCTGTGTCCCCGCCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGGAAAGAGCTACTGGGTTACATCAGGGCCGTGAATTTTAATGGCAGCGCTGGTACACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 2667;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
45.9%; Score 806.2; DB 9;
Best Local Similarity 69.2%; Pred. No. 2.8e-176;
Matches 1148; Conservative 0; Mismatches 498;
                                                                                                                                                                                                                                                                                                                                              Science 302 (5652), 1960-1963 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .2667
/organism="Mus musculus"
/mol_type="genomic DNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <1. ... > 2667
/gene="GRM8"
/locus_tag="HCM2459"
                                                                                                                                                              Mus musculus (house mouse)
Mus musculus
                                                                                                   genomic survey sequence
                                                                                                                              AY406145.1 GI:39762119
                                                                                                                                                                                                                                                                                                                                 gene trios
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bource
                                                                   LOCUS
                                                                                                             ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                             JOURNAL
PUBMED
                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene
                                   RESULT 6
AY406145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
```

유 ઠે a ò 유 ò 셤 ò a ઠે 셤

ઠે

1422

2388

2328

1482

1542 2504

à

1195 GAAGGAAAGGCCCATTTGTAATTGATGCTGTATATTCCATGGCTTACGCCCTGCACAAT 1254 283 ATGCACCGTGACCTGTCCCGGCCGCGTAGACTCTGCCCTCGCATGGACCCGTGGAT 342 1255 ATGCACAAAGGCTTAGTCATTGTAATTCTGCCTTGTCCACGAATGCCATTGTCACGAATGACTTGTCACGAATGATTGAT	CGCAATGGCTGGCCGAGTACAAGTCATCGGCTCGTGAACAACACACCTCCACAAAAACACAAGTCAAAAGTCATCGGCCTCGTGAACAACACCTCAAAAACACAATGAACAATCAAAGAACAATCACACAACAACAACAACAACAAAAAAAA
8 8 8 8 8 8	8 4 8 4 8 4 8 4 8 4 8 8 8 8 8 8 8 8 8 8
Qy 1543 TACATCATCCTCTTCCACCCGGGCAGAGCGCAAGCGCAAGCGCAGTCTCAAAGCC 1602 Db 2505 TATATTATAATTTTTCATCCAGAGCAGAACGTTCAAAAACGCAAGAAGCTTCAAGGCT 2564 Qy 1603 GTGGTCACCGCCCCATGTCCAACATTCACACAGAAGGCAACTTCAGGCCCAAT 1662 Db 2565 GTGGTCACCGCTCATGCCAAACGAACTGATCAAAAGGGAAATGACCAAAC 2624 Qy 1663 GGGCAAGCCAATCAGGCTGTGAAACTGATCAAAAGGGAAATGACCAAAC 2624 Qy 1663 GGGCAAGCCAAATCAGAGCTGTGAGAACTGGAACTCAAAAGGGAAATGACCAAAC 2624 Db 2565 GGCGAGGTGAAAATCAGAGCTGTGAGAACTGGAGACC 1701 Db 2625 GGCGAGGTGAAAAGCAGAACTGTGAGGTCTTGAAACC 2663	RESULY 7 AV406143 AV406143 AV406143 AV406143 AV406143 AV406143 ACCESSO CCCCC CCCCC CCCCCC CCCCCCC CCCCCC

셤 ò 셤 ઠે g δ g ઠે g ò g

```
Adachi, J. Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P., Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W., Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W., Hayatsu, M., Haramoto, K., Hiraoka, T., Kasukawa, T., Katoh, H., Kawai, J., Koojama, Y., Kondo, S., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohsato, N., Okazaki, Y., Saito, R., Sakai, C., Sakai, K., Sakazume, N., Sano, H., Sakai, C., Sakai, K., Sakai, K., Sakai, K., Sakai, K., Sakai, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A., Muramatsu, M. and Hayashizaki, Y., Direct Submission

Is Submitted (16-UJL-2001) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), Kanagawa 230-0045, Japan (R-mail:genome-reseascriken:jp, Tel:al-45-503-9222, Park Hills And Andrews (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-11) (16-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /proeth_id="BAC35388.1"
/db_xref="G1:26343463"
/db_xref="G1:2634344"
/db_xref="G1:263444"
/db_xref="G1:263444"
/db_xref="G1:263444"
/db_xref="G1:263444"
/db_xref="G1:263444"
/db_xref="G1:263444"
/db_xr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to prepare mouse tissues.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1354 AGGATTTGATGCTTACTTCACATCCCGGACACTTGAAAACAACAGGAGAAATGTATGGTT 1413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1414 TGCCGAATACTGGGAAGAAACTTCAACTGCAAGTTGACAATTAGTGGATCCAAAAAAA 1473
Group Phase I & II Team.
Analysis of the mouse transcriptome based on functional annotation of 60,770 tull-length cDNAs
Nature 420, 563-573 (2002)
6 (bases I to 4209)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="unnamed protein product; METABOTROPIC GLUTAMATE RECEPTOR 7 PRECURSOR homolog [Rattus norvegicus] (SWISSPROT|P35400, evidence: FASTY, 100%ID, 41.6%length,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               102 TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 4209;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Please visit our web site for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     45.2%; Score 793.8; DB 3;
68.2%; Pred. No. 2.3e-173;
iive 0; Mismatches 522;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        db xref="FANTOM DB:E130018M02"
|db xref="taxon:10090"
|clone="E130018M02"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             URL:http://genome.gsc.riken.jp/
URL:http://fantom.gsc.riken.jp/
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /mol_type="mRNA"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /codon start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   match=1143)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . .4209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 1132; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
JOURNAL
                                                                                                                                           JOURNAL
                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Komno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes Genome Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AK053447
Mus musculus 0 day neonate eyeball CDNA, RIXEN full-length enriched library, clone:E130018M02 product.METADOTROPIC GLUTAMATE RECEPTOR 7 PRECURSOR homolog [Rattus norvegicus], full insert sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H. Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsunoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system-*384-format Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2568
                                                                                                                                                                                                                                                                                                                                                                                             ACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTC 1542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota, Metazoa; Chordata; Craniata; Vertebrata, Buteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genome Exploration Research Group Phase II Team and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The FANTOM Consortium and the RIKEN Genome Exploration Research
                                                                                                              GAAGCCAAACCTATTGGATTTACCATGTATACCACCTGCATCATTTGGTTAGCTTTCATC
                                                                                                                                                                                                                                                                                   ACTGTCTCCATGAGTTTAAGTGCTTCAGTATCTCTGGGCATGCTCTATATGCCCCAAGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGGCCAAGCCCATCGGCTTCACCATGTACACCACCTGCATTGTCTGGGTGGCCTTCATC
                                                                                                                                                                                                                                CCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCCAAGCGCAAGCGCAGTCTCAAAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTGGTCACCGCCCACCATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Functional annotation of a full-length mouse cDNA collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2629 GGCGAGGTGAAAGTGAACTCTGTGAGAGTCTTGAAACC 2667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGGAAGCCAAATCAGAGCTGTGTGAGAACCTGGAGACC 1701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Carninci, P. and Hayashizaki, Y.
High-efficiency full-length cDNA cloning
Heth. Enzymol. 303, 19-44 (1999)
9279253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nature 409, 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AK053447.1 GI:26343462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The RIKEN Genome E:
FANTOM Consortium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HTC; CAP trapper.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AK053447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0499374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0530913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1076861
                                                                                                                                                2329
                                                                                                                                                                                                                                                                                                                2389
                                                                                                                                                                                                                                                                                                                                                                                             1483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1663
                                                                                                                                                                                                                                1423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
MEDLINE
PUBMED
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AK053447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
```

Wed

```
Location/Qualifiers
1. .2611
/organism="Pan troglodytes"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Science 302 (5652), 1960-1963 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol_type="genomic DNA"
/db_xref="taxon:9598"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene="GRM7"
/locus_tag="HCM0814"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene trios
1239
                                        1299
                                                                                 1359
                                                                                                                                                                                        2792
                                                                                                                                                                                                             1539
                                                                                                                                                                                                                                 2852
                                                                                                                                                                                                                                                        1599
                                                                                                                                                                                                                                                                           2912
                                                                                                                                                                                                                                                                                                  1659
                                                                                                                                                                                                                                                                                                                      2972
                                                                                                                                                                                                                                                                                                                                                   RESULT 9
AY401209
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PUBMED REFERENCE AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
               셤
                                        ò
                                                      ద
                                                                                ઠે
                                                                                                g
                                                                                                                   õ
                                                                                                                                          g
                                                                                                                                                                   ò
                                                                                                                                                                                   g
                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                              유
                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                  셤
                                                                                                               1653
                                                                                                                                                        1713
                                                                                                                                                                                                                                            1833
                                                                                                                                                                                                                                                                                                                                                                                                                                                            2131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1178
                        1954 TTGTGAGCCCTGTGATGGATACCAGTATCAATTTGATGAGATGACATGTCAGCATTGTCC 2013
                                                                                                                                                                                                                                                                                                                                                                                                                2071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCCTCCCACTCGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCAG 1238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     281
                                                                                                                                    401
                                                                                                                                                                             TGTAACCTTCAATGAGAACGGAGACGCACCGGGGCGCTACGACATCTACCAGTACCA--- 458
                                                                                                                                                                                                                                                                 578
                                                                                                                                                                                                                                                                                                            638
                                                                                                                                                                                                                                                                                                                                                     698
                                                                                                                                                                                                                                                                                                                                                                                                                                      818
                                                                                                                                                                                                                                                                                                                                                                                              758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    998
         221
                                                            .654 GGGCAAGAAGTTGTTGAAGTATATCCGCAATGTTAACTTCAATGGTAGTGCTGGAACCCC
                                                  GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCCATGGGCCCACGCGCTGCACGC
                                                                                                                                                                                                                                                               CAGAATAGAGCGGATGCCAGTGGCCAGCGAGCTGCCGCGCTCCATCTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAGTGGGACTCGCCGTGGGCCGTGCTGCCCTTCCTGGCCGTGGTGGCCATCGCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAGTGGCACTCCCCCTGGGCTGTAATTCCTGTTTCCTGGCAATGTTGGGGATCATTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CACGCTGTTCGTGGTCACGTTTGTGCGCTACAACGATACCCCCCATCGTCAAGGCCTC
                                                                                          CATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                                                                                                                                          579 TCTGCCCTGCCAGCCCGGGGAGCGAAAGAAGACTGTGAAGGGCATGGCTTGCTGCTGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          879 GGGCCGGGAACTGAGCTACTGCTGGCGGCATCTTTCTGTGCTACGCACTACCTT
                                                                                                                                                                                                                                          1774 AACAAACACTACCAATCCTGGTTATCGTCTCATTGGGCAGTGGACAGATGAACTGCAGCT
                                                                                                                                                                                                                                                                                                                                                                                              CTACGACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                          2192 TGGGCGGGAACTCAGCTATGTTTTATTGACAGGCATCTTTCTCTGCTATATCATCATCATCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ccraarcarreccaageccagareregcagrerectreccacgrererrerreggerr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGCATGAGCATCAGCTACGCGCCCTGCTGACCAAGACCAAGCGCATTTACCGCATCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGAGCAGGCAAACGGTCGGTCAGTCCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATCACCTTCATCCTCCTTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2432 AATTACCTCCAGTTTAATATCGGTGCAACTTCTAGGTGTCTTTATTTGGTTTGGGGGTTGA
        AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                                                                                    TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                                                                                                                       ACTGCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCT
                                                                                                                                                                                                                                                                                                                                                   639 CTGCGAGCCCTGCACCGGGTACCAGTAGAGACCGCTACACCTGTAAGACCTGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCTCATGATCGCAGAGCCGGACCTGGTGCTTCGCTCCGCCGCATCTTCCTAGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2312 GGGTATGTGTATTAGTTATGCAGCCCTTTTAACAAAAACCAATCGGATTTATCGCATATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2372 cgagcagggaagaaarcggrgacagcrcccagacrcaraagcccaacarcacaacrcgc
                            1474
                                                222
                                                                     1534
                                                                                                                                    342
                                                                                                                                                                                                                                                               519
                                                                                                                                                                             402
                                                                                                                                                                                                                       459
                                                                                                                                                                                                                                                                                                                                                                                              669
                                                                                                                                                                                                                                                                                                                                                                                                                 2014
        162
                                                                                          282
                                                                                                                                                                                                                                                                                                                                                                                                                                      759
                                                                                                                                                                                                                                                                                                                                                                                                                                                            2072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    939
                           g
                                               ઠે
                                                                 g
                                                                                                                                                                                                                                                                                ద
        ઠે
                                                                                         ઠે
                                                                                                         . 염
                                                                                                                              ઠે
                                                                                                                                                   8 & 8
                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                         5 A 5 B 5 B 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ብ ራ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ያ
የ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8 8 8.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8 6 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6 6 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
```

1478 1598 AX401209

2611 bp DNA linear GSS 15-DEC-2003
Pan troglodytes GRM7 gene, VIRTUAL TRANSCRIPT, partial sequence,
genomic survey sequence.
AX401209
AY401209.1 GI:39757198 Pan troglodytes (chimpanzee)
Pan troglodytes
Bukaryota; Metacoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Bukaryota; Metacoa; Chordata; Catarrhini; Hominidae; Pan.
1 (bases 1 to 261)
Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A.,
Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B.,
Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J.,
Adams, M.D. and Cargill, M. Inferring nonneutral evolution from human-chimp-mouse orthologous 14671302 2 (bases 1 to 2611) 2 (Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B., Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M. Direct Submisted (according to a constituted (16-NOV-2013) Celera Genomics, 45 West Gude Drive, Rockville, MD 20850, USA This sequencing genomic exons and ordering them based on alignment. 2612 TCTTCTCATGGTCACATGTACTGTGTATAGCCATCAAGACTCGGGGTGTACCAGAGAATTT 2552 GGGAGTTCTCAAATGTGACATCACAGACCTTCAGATCATTTGTTCTTTGGGATATAGCAT 2672 TAATGAAGCCAATGGATTCACTATGTACACGACTTGTATCGTATGGTTGCTT AGICTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAA GECETAGTEACAGCAGCACCATGTCATCGAGGCTGTCACACAAACCCAGTGACAGGCC 1419 CATCCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCAC GCTTACAATCTCCATGAACCTAAGTGCATCAGTGGCGCTGGGGATGCTATACATGCAGAA 1479 ACTGACGGICTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAA AGCCGTGGTCACCGCCGCCACATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCC GCTGCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTT CAATGGGGAAGCCAATCAGAGCTGTGTGAGAACCTGGA 1697

1178

1238

2034

1358 2214 1418 2274 1478

2154

1538 2394 1598 2454 1658 2514

2574

2334

Wed

```
2671 bp DNA linear GSS 15-DEC-2003 Pan troglodytes GRM8 gene, VIRTUAL TRANSCRIPT, partial sequence, AY406144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAATGGGGAAGCCAAATCAGAGCTGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAA 1718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               human-chimp-mouse orthologous
                                                                                                                                                                                                                                                                                                                                                                                                                                 CATCCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCAC
                                                                                                                                                                                                                                                                                                                                      2335 GCTTACAATCTCCATGAACCTAAGTGCATCAGTGGCGCTGGGGATGCTATACATGCCGAA
TGAGCAGGCCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGC
              CATCACCTTCATCCTCCTCCCTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGA
                                                                        1975 AATCACTICCAGTTTAATAICAGTICNNNNNNNNNNNNNNNTICATTIGGTTTGGTTGA
                                                                                                                            2035 recacecaacarearearadaciareardaacaraadacaardaacecaadecad
                                                                                                                                                       2215 TAATGAAGCCAAGCCCATTGGATTCACTATGTACACGACATGTATAGTATGGCTTGCCTT
                                                                                                                                                                                                                                                                                                                                                                ACTGACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                  AGTCTACATCATCCTTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCCGTGGTCACCGCCCCCATGTCCAACAAGTTCACACAGAAGGCCAACTTCAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2455 gecegiagicacaccaccaccareicarcaaccacrercacacaaaccaagacacacaca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pan troglodytes (chimpanzee)
Pan troglodytes
Bukaryota; Metrazoa; Chordata; Craniata; Vertebrata; Euteleostor
Bukaryota; Metrazoa; Chordata; Craniata; Vertebrata; Euteleostor
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Pan.
1 (bases 1 to 2671)
Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A.,
Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B.,
Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J.,
Adams, M.D. and Cargill, M.
                                                                                                                                                                                                                                                            2 (bases 1 to 2671)
Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A.,
Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1719 ACAGACCTACGCCACCCAACCATGTA 1754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Inferring nonneutral evolution from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Science 302 (5652), 1960-1963 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AY406144.1 GI:39762118
GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2515
                                                                                                                                                                                                                                                                                                                                                                                                                                              2395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1599
 1059
                         1915
                                                   1119
                                                                                                      1179
                                                                                                                                                        1239
                                                                                                                                                                                2095
                                                                                                                                                                                                          1299
                                                                                                                                                                                                                                    2155
                                                                                                                                                                                                                                                             1359
                                                                                                                                                                                                                                                                                                               1419
                                                                                                                                                                                                                                                                                                                                                                   1479
                                                                                                                                                                                                                                                                                                                                                                                                                     1539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 10
AY406144
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                            8 8 8
                                                                                                                      ద
                                                                                                                                                                        요 상
                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                               8 6
                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                 g
                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1914
                                        ä
                                                                                                                                           1014
                                                                                                                                                                                              1074
                                                                                                                                                                                                                                                                                                                                                                                            1374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1794
                                                                                                                                                                                                                                                 GGAGGGTAAAGTCCAGTTCGTGATTGACGCAGTCTATGCTATGGCTCACGCCCTTCACCA 1134
                                                                                                                                                                                                                                                                                                  Cargaacaagarcrcrerereacraccesererereceaeareres
                                                                                                                                                                                                                                                                                                                                                                                                                                  518
                                                                                                                                                                                                                                                                                                                                                     1195 addcaagaadriccigaadrararccdcaarcriraarircaardsrachdcrededecrec 1254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     966
                                                                101
                                                                                                                                                                      221
                                                                                                                                                                                                                        281
                                                                                                                                                                                                                                                                           341
                                                                                                                                                                                                                                                                                                                             401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGAATAGAGCGGATGCAGTGGCCAGGGAGTGGCCAGCTGCCGCGCTCCATCTGCAG 578
                                                                                          954
                                                                                                                  TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG 161
                                                                                                                                 GGAGGGGAAGGIGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAGGCGCAACATCTGGTT
                                                                                 AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                                                                                                                                              <u> agacacagarcecaaariecacaegacaegaegaegarriegaaaagarriecaacrareaeca</u>
                                                                                                                                                                                                                                                                           CATGCACCGTGACCTGTGCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                                                                                                                                                             TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                TGTAACCTTCAATGAGAACGGAGACGCACCGGGGCGCTACGACATCTACCAGTACCA---
                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTGCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CANNANANANANANANANANANANAGGTAAAAGAGTCCGNNANATACCCCCTCAGTGTGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTGCCCTGCCAGCCCGGGGAGCGAAAGAAGACTGTGAAGGGCATGGCTTGCTGCTGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGCGAGCCCTCCACCGGGTACCAGTACCAGTGGACCGCTACACTGTAAGACCTGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                crereadectriecearectraccaeraceaerreareaeareacareceeece
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTACGACATGCGGCCCACAGAGAACCGCACGCGCCAGCCCATCCCCATCGTCAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTATGACCAGAGGCCCAATGAAATCGAACGGATGCCAGGATATTCCCATCATCAAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAGTGGCACTCCCCTGGGCTGTGTTCCTGTCTTCCTGGCAATGTTGGGGATCATTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CACGCTGTTCGTGGTCACGTTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGCCGGGAACTGAGGTGCTGCTGGCGGGCATCTTTCTGTGCTACGCCACTACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1735 TGGGCGGGAACTNNNTATGTTCTTTTGACGGCCATCTTTCTTTGCTACATCATCACTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCTCATGATCGCAGAGCCGGACCTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cercardarreceaaceagarereceagrererrerrecegegerrrregeeerr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGCATGAGCATCAGCTACGCGGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                       3;
              Length 2611;
                                       Indels
                                       0; Mismatches 586;
             Score 788.2; DB 9;
Pred. No. 4.3e-172;
            Query Match
Best Local Similarity 65.7%;
Matches 1127; Conservative
                                                                                                                                                                                              1015
                                                                                                                                                                                                                                                 1075
                                                                                                                                                                                                                                                                                                   1135
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1675
                                                                                          895
                                                                                                                    102
                                                                                                                                             955
                                                                                                                                                                      162
                                                                                                                                                                                                                        222
                                                                                                                                                                                                                                                                           282
                                                                                                                                                                                                                                                                                                                              342
                                                                                                                                                                                                                                                                                                                                                                                                                                    459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         999
                                                                42
                                                                                                                                                                                                                                                                                                                                                                                402
                                                                                                                                                                                                                                                                                                                     8 6 8 6
                                                                                                                                     용 . 욧
                                                                                                                                                                                      g
                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                          8 S
                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                             6 B 6 B 6 B 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6 6 6 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   영 경
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                  ò
                                                                                         셤
                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
```

Wed

```
782 bp mRNA linear EST 15-JUL-2003
UI-M-GMO-cgc-a-23-0-UI.rl NIH BMAP_GMO Mus musculus cDNA clone
LMAGE:30360694 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCGAACTTAGTTACGTGCTCCTAACGGGGATTTTTCTCTGTTATTCAATCACGTTTTTTAA
                                                                                                                                                                                                                                                                                                                   2030 AGGGGAAGAAATCTGTCACAGCGCCCAAGTTCATTAGTCCAGCATCTCAGCTGGTGATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGATGGTCACTTGTACTGTTTATGCCATTAAAACGAGGGGTGTCCCAGAGACTTTCAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1790 CCTTTGTAGATAGTGACCTTTGTCCGCTATAATGACACACCTATCGTGAGGGCTTCAGGAC
                                                                                                                                                                                                                                             1970 TGTGTTTCAGCTATGCAGCCCTTCTGACCAAAACAAACGTATCCACCGAATATTTGAGC
                                                                                                                                                                                                                                                                                                                                                                    cerrearcerearerecaegraceresearcressingresingresingreseareer
                                                                                                                                                                                                                                                                                                                                                                                           2090 CCTTCAGCCTCATCTCCGACCTCCTTGGAGTGTTTGTCTGGTTTGTTGTTGATCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCACATCATCATTGACTATGGAGGGAGGGGACACTAGATCCAGAGAAGGCCAGGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCTCAAGTGCGACATCTCGGACCTGTCCCTCATCTGCCTGGGCTACAGCATGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2210 IGCTCAAGIGIGACATITCTGAICTCTCACTCATITGITCACTIGGAIACAGIAICCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2330 AAGCCAAACCTATTGGATTTACCATGTATACCACCTGCATCATTTGGTTAGCTTTCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2510 ATATTATAATTTTTCATCCAGAACAGAATGTTCAAAAACGCAAGAGGAGCTTCAAGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGTCACCGCCCCCATGTCCAACATTCACACAGAAGGCCAACTTCAGGCCCAATG
                                                                                                                                                                                   1910 igairccaccacacarancarcaraicriccriccaccariciricciaesacricciaesa
                                                                                                                                                                                                                                                                                                AGGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           824 TGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCCATCGTCAAGGCCTCGGGCC
                                                                             GGGAACTGAGCTACGTGCTGCCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCA
                                                                                                                                               TGATCGCAGAGCCGGACCTGGTTCGCTCCGCCATCTTCCTAGGGCTCGGCA
                                                                                                                                                                                                                         TGAGCATCAGCTACGCGGCCCTGCTGACCAAGACCGAATTTACCGCATCTTTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGAAGCCAAATCAGAGCTGTGAGAACCTGGAGACC 1701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cccaágrcaaacrcacrcrcrcagagrcrrcaaacc
                                                                                                             1850
                                                                                                                                                                                                                         1004
                                                                                                                                                                                                                                                                                                1064
                                                                                                                                                                                                                                                                                                                                                                    1124
                                                                                                                                                                                                                                                                                                                                                                                                                                            1184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2630
                                                                             884
                                                                                                                                                 944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 11
CD353576
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                셤
                                                                           ઠે
                                                                                                  8
                                                                                                                                               ઠે
                                                                                                                                                                           g
                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                   요
                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                               සු දු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    성 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1549
                                                                                                                                                                                                                                                                                                                                                                                                                       1019 GATTTGATCGATACTTTAGAAGCCGAACTCTTGCCAATAATCGAAGAATGTGTGGTTTG 1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1136 GTCATATAAAGAAATGCACAGGGCTGGAGCGAATTGCTCGGGATTCATCTTATGAACAGG 1195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1196 AAGGAAAGGICCAATITGIAATIGAIGCIGIATATICCAIGGCITACGCCCIGCACAATA 1255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1256 TGCACAAAGATCTCTGCCCTGGATACATTGGCCTTTGTCCACGAATGAGTACCATTGATG 1315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1610 AACGCTGTGAAGGTTACAACTACCAGGTGGATGAGCTGTCCTGTGAACTTTGCCCTCTGG 1669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGTGTAAGCCAGGGGAGGGAAGAAACGGTGAAAGGGGTCCCTTGCTGCTGCTGTG 1609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1730 GGCATTCTCCCTGGGCTGTGGTGCTGTTTGTTGCAATATTGGGAATCATCGCCACCA 1789
                                                                                                                                                                                                                                                                                                                                                                                       103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    343
                                                                                                                                                                                                                                                                                                                                                                                                                                                               163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TAACCTTCAATGAGAAGGGAGACGCACCGGGGCGCTACGACATCTACCAGTACCAACTGC 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      464 GCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCACAGAA 523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCCCTGCACCGGGTACCAGTGGACCGCTACACCTGTAAGACCTGCCCTAACG 703
                                                                                                                                                                                                                                                                                                                                                                                     GGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAACAACAACATCTGGTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCGAGTICTGGGAGGACAACTICCATIGCAAGTIGAGCCGCCCACGCGCTCAAGAAGGGAA
Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M.
Direct Submission
L. Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive, Rockville, MD 20850, USA
This sequence was made by sequencing genomic exons and ordering them based on alignment.
Location/Qualifiers
Location/Qualifiers
1. 2671
And Lype="genomic DNA"

/db xref="genomic DNA"
/db xref="genomic DNA"
/db xref="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCACATCAAGAAGTGCACCAACGAAGCGCATCGGGCAGGAGGACTCGGCCTATGAGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAACAAAAGCACAGAGTACAAAGTCATCGGCCACTGGACCAATCAGCTTCA----TG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1079 cagaartrigggaggagaartriggciggaagtragarcacarggg---aaaaggaaca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TAGAGCGGATGCAGTGCCAGGGAGTGCCCAGCAGCTGCCGCGCTCCCATCTGCAGTCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      584 CCTGCCAGCCCGGGGAGCGAAAGAAGACTGTGAAGGCCATGGCTTGCTGCTGCCACTGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACATGCGGCCCACAGAACCGCACGAGCTGCCAGCCCATCCCCCATCGTCAAGTTGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATCNNNNNCCCAACATGAACCGCACAGGCTGCCAGCTTATCCCCATCATCAAATTGGAGT
                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                   6
                                                                                                                                                                                                                                                                                                              Length 2671;
                                                                                                                                                                                                                                                                                                              Score 777; DB 9; Length 26
Pred. No. 1.7e-169;
0; Mismatches 543; Indels
                                                                                                                                                                                                                                          /gene="GRM8"
/locus_tag="HCM2459"
                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 66.7%;
Matches 1106; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              524
                                                                                                                                                                                                                                                                                                                                                                                       44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1550
                                                                                                                                                                                                                                                                                                                                                                                                                                                             104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             764
                                       TITLE
JOURNAL
                                                                                                                                                                                                                         gene
                                                                                                                            FEATURES
                                                                                            COMMENT
                                                                                                                                                                                                                                                                            ORIGIN
```

8 8 8

중 유

a ઠે ያ ያ g ઠે a ઠે

ઠે g ઠે g δ g ઠે 8 õ ď δ g

2329 1423 1483

540

1371

600

1431

9

```
CN409312 711 bp mRNA linear EST 16-MAY-2004
17000424346609 GRN_ES Homo sapiens cDNA 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /tissue_type="embryonic stem cells, cell lines H1, H7, and
                                                                                                                                                                                                                                                                                                                                                                                                                   TTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTGACGGTCTCC 1491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCATC 1551
  CTCATCTCGCTGCAGTTGCTTGGCATCTGCGTGGTTGGTGGTGGACCCCTCCCACTCG 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone_lib="GRN_ES"
/note="Oligo dT primed, full-length enriched cDNA library
/note="Oligo dT primed hss cell lines H1 (p32), H7 (p29),
end H9 (p26) maintained in feeder-free conditions"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Livers 1. Variable 1. V. V. Wei, H., Zhang, S., Lei, S., Murage, J., Fisk, G.J., Li, Y., Xu, C., Fang, R., Guegler, K., Rao, M.S., Mandalam, R., Li, Y., Xu, C., Fang, R., Guegler, K., Rao, M.S., Mandalam, R., Lebkowski, J. and Stanton, L.M.

Transcriptome characterization elucidates signaling networks that control human ES cell growth and differentiation

Mat. Biotechnol. 22 (6), 707-716 (2004)

Contact: Brandenberger R.

Regenerative Medicine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 711)
                                                                                                                                                                                                                                                                                                                                                     661 TTTGGCACCTCGCAGTCGACTACATCCAGACAACCACTGACGCTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGGCGTGCTCAAG
                                                                                                                                     1252 TGGGACATCTGGACTGTCCCTCATCTGCCTGCTGGGCTACAGCATGCTGCTGATGGTC
                                                                                                                                                                  481 TGTGACATCTCGGACCTGTCGCTCATCTGCCTCCTGGGCTACAGCATGCTGTGATGGTC
                                                                                                                                                                                                                                                                                541 ACGTGTACTGTGTATGCCATCAAGACTCGAGGCGTGCCTGAGACCTTCAATGAGGCCAAG
                                                                                          gradicadentecadadecadedacentradececedecinedecedades
                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7; Length 711;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         230 Constitution Drive, Menlo Park, CA 94025, USA Tel: 650 473 8658
Fax: 650 473 760
Email: rbrandenberger@geron.com
Insert Length: 71 Std Error: 0.00.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 579; DB 7; I
Pred. No. 1.4e-123;
0; Mismatches 60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1. .711
/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CN409312.1 GI:47396436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 91.1%;
Matches 637; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Geron Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1552 CT 1553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CT 782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CN409312
                                                                                                                                                                                                                                   1312
                                                                                                                                                                                                                                                                                                                             1372
                                                                                                                                                                                                                                                                                                                                                                                                                      1432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1492
    361
                                               1192
                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 12
CN409312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                   g
                                                                                                                                                                            g
                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ద
                                 8
                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db xref="taxon:10090"
/clone="IMAGE:30360694"
/tisque type="whole brain"
/dev stage="11, 5 and 15 days newborn"
/lab_host="DH10B (TI phage resistant)"
/lab_host="DH10B (TI phage resistant)"
/lab_host="DH10B (TI phage resistant)"
/lote="Organ: Brain; Vector: pYX-Asc; Site_1: EcoR I;
/note="Torgan: Brain; Vector: pYX-Asc; Site_1: EcoR I;
Site_2: Not I; The library was constructed according
Bonaldo, Lennon and Soares, Genome Research, 6:791-806,
1996. Denatured RNA was size fractionated on a 1% agarcse
gel:First strand cDNA synthesis was primed with oligo-dT
primer containing a Not I site.Double strand cDNA was size
selected according to mRNA size fraction, ligated with EcoR
I adaptor, digested with Not! and then clond
directionally into pXX-Asc vector. The library tag
sequence located between the Not I site and the polyA tail
is CGACTGART. This library was created for the University
lows Brain Anatomy Project (BMAP): 'Gene Discovery in the
Developing Mouse Nervous System', supported by National
Institute of Mental Health (NIMH), Hemin Chin, Ph.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGCCGGACCTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATC 1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCTACGCGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGAGCAGGCAAA 1071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGTCGGTCAGTGCCCCGGGTTTCATCAGCCCGGCCTCGCAGCTGGCCATCACCTTCATC 1131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                831
                                                                                                             Email: cgapbs.romail.nih.gov
Tissue Procurement: Dr. Jim Lin, University of Iowa
Tissue Procurement: Dr. Jim Lin, University of Iowa
CDNA Library preparation: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Distribution information can be found at
http://genome.uiowa.edu/distribution/mousefl.html
This clone was contributed by the Brain Molecular Anatomy Project
(BMAP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGCCTGACCTGGGGACCTGTTCACTCCCGCGCATCTTCCTGGGGCTTGGCATGAGCATC 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTGGTCACGTTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCCGGGAACTG 891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTGGTCACTTTTGTGCGCTACAACGACACTCCGATCGTCAAGGCCTCGGGCCGGGAGCTG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCTACGTCCTGCTGGCGGGCATCTTTCTCTGCTATGCCACCACCTTCCTCATGATCGCA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241 AGCTACGCGCCCTGCTGACCAAGACCGCATCTACCGCATCTTTGAGCAGGCAAG 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301 cégitcégitchécécécechégirchréhécécecéceréchécéchichéctrone 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ccgreecccgrecrecccrrcrrccreeccGreereGGCCACGCCGCCACGCTGTTCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cccresccrereccccrcrrccrescrerescarasccarrecrescaraterregre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCTACGTGCTGCTGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCA
1 (bases 1 to 782)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 782;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                47; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tch
al Similarity 94.0%; Pred. No. 1.5e-153;
735; Conservative 0; Mismatches 47;
                                                                                                                                                                                                                                                                                                                                                                                              /organism="Mus musculus"
/mol_type="mRNA"
/strain="C57BL/6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  program coordinator.
                                                                                                                                                                                                                                                                                                                             Seq primer: pYX-5.
Location/Qualifiers
1. .782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
Matches 735; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                             source
                       AUTHORS
TITLE
JOURNAL
COMMENT
REFERENCE
                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
```

Wed

음

δ ద ઠે 요 ઠે g ઠે ద ઠે g

ઠે g ò 셤 ઠે ద δ g ઠે g ò 윉

```
1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HTC 19-AUG-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                              742
                                                                                                                                                                                                                                                                                                                                                                                               802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            600
                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                   main
                                                                                                                                                                                                                                                                                                                                                                                                                                                              361 GGATCTTCCTGGGCCTCGGCATGAGCATCAGCTGTGCGGCGCTGCTCACCAAGACCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421 GCATCTACCGCATCTTCGAGGAGGGCAAGCGGTCGGTCAGCCGCCCCGCGCTTCATCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                481 CCGCCTCGCAACTGGCCATCACCTTCAGCCTCATCTCGCTGCTGCTGCTGCGCATCTGCG
                                                                                                                                                                                                                                                                                                                                  1 CATGCTGGCAGGCACTGTGAGCCCTGCACGGGCTACCAGTACCAGGTGGNACCGCTACACC
                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGCCGTGCTGCCCCTTCCTGGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181 TGGTGGGCATCGCCGCCACACTCTTCGTGGTCACCTTCGTGCGCTATAACGACACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCATITACCGCATCITICAGCAGGCAAACGGICGGCTCAGIGCCCCGCGTITCAICAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGTGGTTCGTGGTGGACCCCTCCCACTCGGTGGTGGACTTCCAGGACCAACGGACACTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1. .653

/organism="Sus scrofa"

/mol type="MRNA"

/db_xref="taxon:9823"

/clone="olf_011_B10"

/sex="male olf_011_B10"

/tissue_type="main and accessory olfactory bulb"

/dev_stage="S_weeks"

/clone_lib="full-length enriched pig cDNA library, mai

and accessory olfactory bulb"
                                                                                                                                                                                                                                                                                                                                                                              TGTAAG-ACCTGCCCCTACGACATGCGGCCCACAG-AGAACCGCACGAGCTGCCAGCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGGTGGGCATCGCCACGCTGTTCGTGGTCACGTTTGTGCGCTACAACGATACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCATCGTCAAGGCCTCGGGCGGGGGGGGGGGTGAGCTGCTGCTGCTGGCGGGGCATCTTCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGACCTGGGGACCTGTTCGCTCCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGCCTCGCAGCTGGCCATCACCTTCATCCTCATCTCCCTGCAGCTGCTCGCATCTGCG
                                                                                                                                                                                                                                                                                                               CTTGCTGCTGCGACTGCGAGCCCTGCACCGGGTACCAGTACCAAGTGG-ACCGCTACACC
                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCCCCCCTTTGCCAGGGCGTGTGCGACATCTCGGACCTGTCCCTC 1275
                                                                                                                                                                                                                                                                             ë.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            653;
                                                                                                                                                                                                                                              Query Match 30.3%; Score 531.2; DB 1; Length Best Local Similarity 91.3%; Pred. No. 1.7e-112; Matches 596; Conservative 0; Mismatches 54; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tetraodon nigroviridis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CR717163 1484 bp mRNA Tetraodon nigroviridis full-length cDNA. CR717163.1 GI:51215408 HTC; cDNA; full-length; Tetraodon nigroviridis Tetraodon nigroviridis
Fax: 81-298-38-8659
Email: seifuji@affrc.go.jp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                              685
                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1163
                                                                                                                                                                                                                                                                                                                                                                                                                                             743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 14
CR717163
LOCUS
                                FEATURES
                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.

1 (bases 1 to 653)

5 Vijanki, S., Hiraiwa, H., Eguchi, T., Watanabe, Y., Honma, D., Saitou, T. and Yasue, H.
Construction of a full-length library of swine olfactory bulb and its preliminary characterization

1. Unpublished (2003)

Contact: Selichiro Fujisaki
Genoma Research Department
National Institute of Agrobiological Sciences
2 Ikenodai, Kukizaki, Inashiki, Ibaraki 305-0901, Japan
Tel: 81-298-38-8659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AU296039

AU296039 full-length enriched pig cDNA library, main and accessory olfactory bulb Sus scrofa cDNA clone olf_011_B10 5', mRNA sequence. AU296039

AU296039

EST.
                                                                                                                                                                                                                                                                                                                                            TGGTTCGTGGTGGACCCCTCCCACTCGGTGGACTTCCAGGACCAACGGACACTTGAC 1224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1403
                                                                                                                                                                                                                                                                             ATCTTCCTAGGGCTCGGCATGAGCTACGCGGGCCCTGCTGACCAAGACCAACCGC 1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGGGCTACAGCATGCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGC 1344
                                                                                                                                                                                                                                 193 TATGCCACCACTTCCTCATGATCGCTGAGCCCGACCTTGGCACCTGGCTGCGCCGA 252
                                                                                                                                                                                                                                                                                                             312
                                                                                                                                                                                                                                                                                                                                                                                                                                             432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             552
                                                                                                 924
                                                                                                                                                                               192
                                                                                                                                                                                                                984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              433 TGGTTTGTGGGTGGACCCCTCCCACTCGGTGGTGGACTTCCAGGACCAGCGGGACACTCGAC 492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGGGCTACAGCATGCTGCTCATGGTCACGTGCACCGTGTATGCCATCAAGACACGCGGC 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              613 GTGCCCGAGACCTTCAATGAGGCCAAGCCCATTGGGCTTCACCATGTACACCACTTGCAT 672
                                                                              864
                                              72
                            CCCATCATCATGAAGCTTGAGGGCTCGCCCTGGCCCGTGCTGCTCCTCCTCCTCGCCGTG
                                                                                                                                                                ATCGTCAAGGCCTCGGGCCGTGAACTGAGCTACGTGCTGCTGGCAGGATCTTCCTGTGC
                                                                                                                                                                                                              TACGCCACTACCTTCCTCATGGTCGCAGAGCCGGACCTGGGGACCTGTTCGCTCCGCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             493 CCCCGCTTCGCCAGGGGTGTGCTCAAGTGTGACATCTCGGACCTGTCGCTCATCTGCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTGCCCGAGACCTTCAACGAGGCCAAGCCCA-TCGGCTTCACCATGTACACCACCTGCAT
                                                                                                                                             ATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTGCTGCTGCCGGCCATCTTTCTGTGC
                                                                                                                                                                                                                                                                                                     253 ATCTTCCTGGGACTAGGGATGAGCATCAGCTATGCAGCCCTGCTCACCAAGACCAACCGC
                                                                            GTGGGCATCGCCGCCACGCTGTTCGTGGTCACGTTTGTGCGCTACAACGATACCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                   1404 TGTCTGGCTGGCC-TTCATCCCCATCTTTTGGCACCT 1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              673 CGTCTGGCTGGCCTTTCATCCCCATCTTTGGCACCT 711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sus scrofa (pig)
Sus scrofa
                                                                                                                                                                                                              925
                                              13
                                                                              805
                                                                                                                                                                                                                                                                             985
                                                                                                                                                                                                                                                                                                                                              1045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1165
               745
                                                                                                             73
                                                                                                                                               865
                                                                                                                                                                                                                                                                                                                                                                                                               1105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 13
AU296039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REPERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
```

871

931

991

```
1311 CACGTGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAA 1370
                                                                                                                                                                                                                1371 GCCCATCGGCTTCACCATGTACACCA--CCTGCATTGTCTGGCTGGCCTTCATCCCCATC 1428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                582 bp mRNA linear EST 17-SEP-2004
ary, thalamus Homo sapiens cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 Arcriccionectaroccaccacciriccicardarcocidadececoaccirocaceroc 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Suzuki,Y., Yamashita,R., Shirota,M., Sakakibara,Y., Chiba,J.,
Mizushima-Sugano,J., Nakai,K. and Sugano,S.
Sequence comparison of human and mouse genes reveals a homologous
block structure in the promoter regions
Genome Res. 14 (9), 111-1718 (2004)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 582)
          GTGCGACATCTCGGACCTGTCCCTCATCTGCCTGCTGGGCTACAGCATGCTGCTGATGGT
                                                                                                                                          eccertricaritriacaangracracagecargrarrantragerageargearceaarc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTGTGACATGTCTGACTCTCTCTGATTTGCCTACTGGGCTACAGCATGCTGCTCATGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      853 AACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACTGAGCTACGTGCTGCTGGCGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AICITICIGEOCIACGCACTACCTTCCTCATGATCGCAGGCCGGACCTGGGGACCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCGGCCCTGCTGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCCTGGCCGTGGTGGCCATCGCCGCCACGCTGTTCGTGGTGGTCACGTTTGTGCGCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Department of Virology
Institute of Medical Science, University of Tokyo
4-6-1, Shirokanedai, Minatoku, Tokyo 108-8639, Japan
Email: ysuzuki@ims.u-tokyo.ac.jp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="taxon:0408"
/tissue_type="thalamus"
/clone_lib="Sugano_cDNA_library, thalamus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                     TTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCA 1469
                                                                                                                                                                                                                                                                                                                                                        28.3%; Score 497.2; DB 5; 90.9%; Pred. No. 1.3e-104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BP359939 Sugano cDNA library, THR00488, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BP359939.1 GI:52289953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity
Matches 529; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BP359939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BP359939
          1251
                                                             812
                                                                                                                                                                872
                                                                                                                                                                                                                                                                     932
                                                                                                                                                                                                                                                                                                                     1429
                                                                                                                                                                                                                                                                                                                                                                        992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 15
BP359939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                             셤
                                                                                                             8 6
                                                                                                                                                                                                ठे
                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                          원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGAGCCGGACCTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCAT 1010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGCTACGCGGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGAGCAGGGCAA 1070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1071 ACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATCACCTTCAT 1130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCTCATCTCCCTGCAGCTGCTCGGCATCTGCGTGGTTCGTGGTGGACCCCTCCCACTC 1190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCCGCTTTGCCAGGGGCGTGCTCAA 1250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           152 ACCTGGTGAGCGCAGGAAGATTGTGAAGGGTATCCCTTGCTGGCGCTGTGAGGCGTGT 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi, Actinopterygii, Neopterygii, Teleostei, Euteleostei, Neoteleostei, Acanthomorpha, Acanthopterygii, Percomorpha, Tetraodontiformes; Tetraodontoidea, Tetraodontidae, Tetraodon.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTTACGACATGCG 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCCACAGAGAACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGAGTGGGACTC 770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGCTATGTGCTGCTAACTGGCATCTTCCTTTGCTATGCTACAACATTCTGATGATTTC 511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      811
                                                                                                                                Genoscope.

Direct Submission

Direct Submission

Submitted (10-AUG-2004) Genoscope - Centre National de Sequencage

Submitted (10-AUG-2004) Genoscope - Centre National de Sequencage

Submitted (10-AUG-2004) Genoscope - Centre National Cens. FRANCE

(E-mail : seqref@genoscope.cns.fr - Web : www.genoscope.cns.fr)

The sequences are based on single pass reads.

The constitution available at http://www.genoscope.cns.fr/tetraodon.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGTGGTCACGTTTATCCGCCACACGACACTCCCATTGTTAAGGCATCAGGCCGGGAGTT 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rccaresecacicarcciererariscacicarcareseraresecacicarericar 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATGCAGTGGCCCGGCGCATCCGTAAAATCCCTTCCTCAATTTGCAGTCAGCCCTGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCCGGGGAGCGAAAGAAGACTGTGAAGGGCATGGCTTGCTGCTGGCA¢TGCGAGCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u> acccaardadaarcacacacacrererrecaarcecraragreaarradagredaecre</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCGTGGGCCGTGCTGCCCCTCTTCCTGGCCGTGGTGGGCATCGCCGCCACGCTGTTCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGTGGTCACGTTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGCTACGTGCTGCTGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AATTATTGACTACGAGGACCAGAGGACATCAAACCCGACCATGGCTCGCGGTGTGCTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATGCAGTGGCCAGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCTGCCCTGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 crrescereasedeserserrasers and entrances established entrances established entrances en
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 1484;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 503; DB 3; Length 14
Pred. No. 7e-106;
0; Mismatches 265; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="mRNA"
/db_xref="taxon:99883"
/tissue_type="Eggs"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tch 28.7%;
al Similarity 71.6%;
674; Conservative C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              831
                                                                                                                                        AUTHORS
TITLE
JOURNAL
                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8 &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8 è
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      원장
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
```

1032

240

ö

Gaps

ö 582;

852

9

Search completed: June 21, 2005, 08:50:49 Job time : 5991 sece

Ivis bade Blank (nsbjo)

```
MOLECULE TYPE: CDNA IMMEDIATE SOURCE:
                                                                   June 21, 2005, 04:25:23 ; Search time 314 Seconds (without alignments) 9145.432 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 18, App
                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                            1 atgccaggggtatcatcatc......acaccaaccatgccatctag 1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1
Sequence 1
Sequence 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                              2405568
                                                                                                                                                                                                                                                                                                                                    Issued Patents NA:* . . /cgn2_6/ptodata/1/ina/5A_COMB.seq:* . /cgn2_6/ptodata/1/ina/5B_COMB.seq:* . /cgn2_6/ptodata/1/ina/6A_COMB.seq:* /cgn2_6/ptodata/1/ina/PcTUS_COMB.seq:* /cgn2_6/ptodata/1/ina/PcTUS_COMB.seq:* /cgn2_6/ptodata/1/ina/PcTUS_COMB.seq:* /cgn2_6/ptodata/1/ina/backfiles1.seq:*
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-016-434-1074
US-09-820-809-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -09-016-434-1118
-08-617-785-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PCT-US91-09422-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PCT-US91-09422-20
                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -08-453-862-1
-08-452-734A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -09-817-464-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JS-08-617-785-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -08-176-401B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-641-318-1
US-09-641-318-3
                                                                                                                                                                                                     1202784 segs, 818138359 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -08-823-110-5
-08-604-298-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -08-604-298-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -09-820-809-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -08-823-110-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-617-785-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -09-817-464-1
-08-407-875-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -09-277-858-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -09-126-280-3
-08-855-146-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -08-855-146-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .09-126-280-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUMMARIES
                                                                                                                                                                                                                                                                                       Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                              - nucleic search, using sw model
                                                                                                                                                                             Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                     Minimum DB seq length: 0 Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query
Match Length DB
                                                                                                                 US-10-828-332-6
1755
                                                                                                                                                                   IDENTITY NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3431
3431
3884
3884
2736
2736
2961
2670
2635
3321
2724
3833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2745
2745
2766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1021
                                                                                                                   Title:
Perfect score:
                                                                                                                                                                 Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             871
860.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               823.8
823.8
823.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1712.4
1707.6
11516.4
11470.8
11470.8
11470.8
11467.8
11467.8
880.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  823.8
821.6
821.6
821.6
821.6
821.6
808.8
806.8
                                              OM nucleic
                                                                                                                                                                                                                                                                                                                                         Database :
                                                                                                                                             Sequence:
                                                                                                                                                                                                     Searched:
                                                                      Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Result
```

	ALIGNMENTS					
Sequence 5, Appli	US-08-367-264-5	е	3919	16.5	290.2	75
Sequence 5, Appl	US-08-486-270-5	-	3919	16.5	290.2	44
Sequence 5, Appli	US-08-072-574-5	-	. 3919	16.5	290.2	43
Sequence 1080, Ag	US-09-016-434-1080	4	3410	16.7	293.4	42
Sequence 3, Appli	US-08-794-158-3	m	2637	16.7	293.4	41
Sequence 1, Appli	US-08-794-158-1	m	2637	16.7	293.4	40
Sequence 1490, Ap	US-09-016-434-1490	4	2621	19.7	345.2	33
Sequence 3, Appl	US-09-258-523-3	m	2619	19.9	350	38
Sequence 1, Appl	US-09-258-523-1	m	2619	19.9	350	37
Sequence 3, Appl:	US-08-337-797A-3	m	2619	19.9	350	36
7,	US-08-337-797A-1	٣	2619	19.9	350	32
Sequence 15, Appl	US-09-817-464-15	4	630	20.0	350.6	34
	US-08-617-785-15	m	630	20.0	350.6	33
Sequence 7, Appl	US-09-817-464-7	4	1588	38.7	680	32
Sequence 7, Appl	US-08-617-785-7	m	1588.	38.7	680	31
Sequence 3, App]	US-09-817-464-3	4	3804	45.2	793.4	30
Sequence 3, Appl	US-08-617-785-3	m	3804	45.2	793.4	59
Sequence 13, Appl	US-09-817-464-13	4	2766	45.2	793.4	78

```
PCT-US91-09422-18
Sequence 18, Application PC/TUS9109422
Sequence 18, Application PC/TUS9109422
Sequence 18, Application PC/TUS9109422
Sequence 18, Application PC/TUS9109422
APPLICANT: Housmed, Khaled M. APPLICANT: Housmed, Khaled M. APPLICANT: Housmed, Khaled M. APPLICANT: Almers, Wolfhard
TITLE OF INVENTION: G REQUENCES: 33
CORRESPONDENCE ADDRESS: 37
CORPUTER: California
COUNTRY: USA
CONFUTER: LIBM PC COMPATION: MEDIUM TYPE: FOLDS/MS-DOS
SOFTWARE: PATELICATION DATA:
APPLICATION NUMBER: PCT/US91/09422
CLASSIFICATION NUMBER: US 07/648,481
FILING DATE: 19-11212
CLASSIFICATION DATA: NO PREDICATION DATA: APPLICATION NUMBER: US 07/648,481
FILING DATE: 18-MAR-1991
RRIOR APPLICATION DATA: 30-JAN-1991
RRIOR APPLICATION NUMBER: US 07/626,806
FILING DATE: 12-DEC-1990
ATTORNEY/AGENT INFORMATION: NAME: PREPREDENCE/CONFORMATION: NAME: PREPREDENCE/CAND NUMBER: US 07/626,806
FILING DATE: 12-DEC-1990
ATTORNEY/AGENT INFORMATION: NAME: PREPREDENCE/CAND NUMBER: US 07/626,806
FILING DATE: 12-DEC-1990
ATTORNEY/AGENT INFORMATION: NAME: PREPREDENCE/CAND NUMBER: US 07/626,806
FILING DATE: 12-DEC-1990
ATTORNEY/AGENT INFORMATION: TELEFORM AUMBER: US 07/626,806
FILING DATE: USA DATE OF DATE OF TELEFORM AUMBER: US 07/626,806
FILING DATE: USA DATE OF DATE OF TELEFORM AUMBER: US 07/626,806
FILING DATE: USA DATE OF D
```

```
CATGAGCATCAGCTACGCGGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA
ORGANISM: Rattus
                                                                                                                                                                                                                                                                                                             1542
        1002
                                        1062
                                                                         1122
                                                                                                                                                                                           2748
                                                                                                                                                                                                                                                            2868
                                                                                                                                                                                                                                                                             1482
                                                                                                                                                                                                                                                                                             2928
                                                                                                                                                                                                                                                                                                                             2988
                                                                                                                                                                                                                                                                                                                                               1602
                                                                                                                                                                                                                                                                                                                                                              3048
                                                                                                                                                                                                                                                                                                                                                                                                               1722
                                                        2508
                                                                                         2568
                                                                                                         1182
                                                                                                                          2628
                                                                                                                                                                           1302
                                                                                                                                                                                                           1362
                                                                                                                                                                                                                            2808
                                                                                                                                                                                                                                             1422
                    g
                                                                                    g
                                                                                                                                     8
                                                                                                                                                        8 è
                                                                                                                                                                                     g
                                                                                                                                                                                                                       ď
                                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                              ద
                                       ઠે
                                                    g
                                                                   ð
                                                                                                         8
                                                                                                                     a
                                                                                                                                                                                                      ठ
                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2447
                                                                                                 1547
                                                                                                                                                                                                                                                                     1847
                                                                                                                                                                                                                                                                                                                                                                                                       2087
                                                                                                                                                                                                                                                                                                                                                                                                                                        2147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1001
                                                                 ö
                                                                                                                                  1607
                                                                                                                                                           1727
                                                                                                                                                                                                                                                                                                     1907
                                                                                                                                                                                                                                                                                                                                       1961
                                                                                                                                                                                                                                                                                                                                                                       2027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          881
                                                                                                                                                                                                                    341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          821
                                                                                  101
                                                                                                                  161
                                                                                                                                                   221
                                                                                                                                                                                    281
                                                                                                                                                                                                                                                     401
                                                                                                                                                                                                                                                                                      461
                                                                                                                                                                                                                                                                                                                      521
                                                                                                                                                                                                                                                                                                                                                       581
                                                                                                                                                                                                                                                                                                                                                                                         641
                                                                                                                                                                                                                                                                                                                                                                                                                        701
                                                                                                                                                                                                                                                                                                                                                                                                                                                         761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          941
                                                                                                                 GCGCAATGGCTCGGCCCAGTACAAGGTCATCGGCTCGTGGACCAGACCACCTGCACCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2148 CGACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGC
                                                                                                                                                                                                                             CATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                                                                                                                                                                                      GCCCTGCCAGCCCGGGAAGAAGAAGAAGACTGTGAAGGGCATGGCTTGCTGCTGCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                 42 AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAGACGCGGAACATCTGGTT
                                                                                            AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAACAGCGCAACATCTGGTT
                                                                                                                                                    AAGCCACATCAAGAAGTGCACCAACCGAGAGGGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                                                                                                                                    GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGC
                                                                                                                                                                                                                     CATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                                                                                     TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                                                                                                                                                              TGGCACCCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                                                                                                                                                                                      TGTAACCTTCAATGAGAACGGAGGCGCACGCTACGACATCTACCAGTACCAACT
                                                                                                                                                                                                                                                                                                TGTAACCTTCAATGAGAACGGAGACCCACCGGGGCGCTACGACTCTACCAGTACCAACT
                                                                                                                                                                                                                                                                                                                                                                                        GCCCTGCCAGCCCGGGGAGGAGGAGGACTGTGAAGGGCATGCCTGCTGCCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                         CGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGACATGCGGCCCACAGAGCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTGGGACTCGCCGTGGCCGTGCCCCTCTTCCTGGCCGTGGTGGGCATCGCCGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGGGACTGGCCGTGGCGCGCCCTCTTCCTGGCCGTGGTGGGCATCGCCGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCGGGAACTGAGGTGCTGCTGCGGGGCATCTTTCTGTGCTACGCCACTACCTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CATGATCGCAGAGCGGGACCTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGG
                                                                  Gaps
                                                                 ö
                                                Length 4095
                                                                 1; Indels
                                                 DB 5;
                                                Query Match 97.6%; Score 1712.4; Best Local Similarity 99.9%; Pred. No. 0; Matches 1713; Conservative 0; Mismatches
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 463..3198
PCT-US91-09422-18
                                                                                                 1488
                                                                                                                                                                                                    1668
                                                                                                                                                                                                                                                                     1788
                                                                                                                                                                                                                                                                                                      1848
                                                                                                                                                                                                                                                                                                                                                                      1968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2268
                                                                                                                                                                                                                                      1728
                                                                                                                                                                                                                                                                                                                                       1908
                                                                                                                                                                                                                                                                                                                                                                                                        2028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2388
                                                                                                                                                    162
                                                                                                                                                                                     222
                                                                                                                                                                                                                     282
                                                                                                                                                                                                                                                     342
                                                                                                                                                                                                                                                                                       402
                                                                                                                                                                                                                                                                                                                      462
                                                                                                                                                                                                                                                                                                                                                       522
                                                                                                                                                                                                                                                                                                                                                                                         582
                                                                                                                                                                                                                                                                                                                                                                                                                          642
                                                                                                                                                                                                                                                                                                                                                                                                                                                         702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             942
                                                                                                 a
                                                                                                                  ò
                                                                                                                               셤
                                                                                                                                                 8
                                                                                                                                                                a
                                                                                                                                                                              ઠે
                                                                                                                                                                                               g
                                                                                                                                                                                                                 8 8 8
                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                    6 8 6
                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                      8 B 8
                                                                                                                                                                                                                                                                                                                                                                                                    8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                  ò
```

2687 2747 1361 2807 1421 1481 2927 1541 1601 3047 3107 1181 2627 1301 2987 1661 CTCCCACTCGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGG GCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAA CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAAGCGCAAAGCGCAGTCTCAAAGC CGTGGTCACCGCCGCCACCATGTCCAACAAGTTCACACAGAAGGCCAACTTCAGGCCCAA CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACT GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGT CGTGGTCACCGCCGCCCCCCCATGTCCAAAGTTCACACAGAAGGGCAACTTCAGGCCCAA 2448 CATGAGCATCAGCGGGCCCTGCTGACCAAGACCAACCGCATTACGCGATCTTGA GCAGGCCAAACGGTCAGTGCCCCGCGTTTCATCAGCCCCGGCCTCGCAGCTGGCCAT GCAGGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCACCCCCGGCCTCGCAGCTGGCCAT CACCTTCATCCTCATCTCCCTGCAGCTGCTCGCATCTGCGTGGGGTTCGTGGTGGACCC GCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGGAGGCGTGCCCGAGACCTTCAA CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACT GACGGTCTCCGTGAGTCTGAGTGCCTTCAGTCTCCTGGGGATGCTCTACATGTCCCAAAAGT GACCTACGTCACCACCACCATGCCATCTAG 1755

RESULT 2
US-09-609-1
US-09-600-609-1
Sequence 1, Application US/09620809
Sequence 1, Application US/09620809
Sequence 1, Application US/09620809
Sequence 1, Application US/09620809
GENERAL INFORMATION:
THIS OF INVESTION:
TITLE OF INVESTION:
TITLE OF INVESTION:
TITLE OF INVESTION UNMER: US/09/820,809
CURRENT APPLICATION NUMBER: US/09/820,809
CURRENT APPLICATION NUMBER: 00/193,454
PRIOR FILING DATE: 2000-03-31
NUMBER OF SEQ ID NOS: 14
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 1
LENGTH: 2838

셤 ò පු ઠે ď ઠે 8 ઠે 셤 ò g δ 셤 8 g

```
1849
                                                                                                                                                       1429
                                                                                                                                                                                                                                                           1421
                                                                                                                                                                                                                                                                                                                                                            1481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1909
                                                                                                                                                                                                                                                                                                                                                                         1610 CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACT
                                                                                                                                                                                                                                                                                                                                                                                                                                               1670 GACTGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cracarcarceretrecacedededeageageageageceaagegeageceaage
                            GCAGGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCAT
                                                                  CTCCCACTCGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCCGCTTTGCCAGGGG
                                                                                                                                                                                                                                                                                                                    CGAGGCCAACGGCTTCACCATGTACACCACCTGCATTGTCTGGCCTGGCCTTCAT
                                                                                                                                                                                 GCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGGAGACCTTCAA
                                                                                                                                                                                                                                                                                                   CGAGGCCAAGCCCATCGGCTTCACCATGTACACCACCTGCATTGTCTGGCCTGGCCTTCAT
                                                                                                                                                                                                                                                                                                                                                            CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACACA
                                                                                                                                                                                                                                                                                                                                                                                                                    GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAAGCGCAGTCTCAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGTGGTCACCGCCCCACCATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1790 CGTGGTCACCGCCGCCACCATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGGGAAGCCAAATCAGAGCTGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1850 TGGGGAAGCCAAATCAGAGCTGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GLUTAMATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GACCTACGTCACCTACCAACCATGCCATCTAG 1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GACCTACGTCACCTACCAACCATGCCATCTAG 1943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 94105-1492
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENT Release #1.0, Version is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 3
PCT-US91-09422-20
Sequence 20, Application PC/TUS9109422
GENERAL INFORMATION:
APPLICANT: Mulvihill, Eileen R.
APPLICANT: Hagen, Frederick S.
APPLICANT: Housmed, Khaled M.
APPLICANT: Almers, Wolfhard
TITLE OF INVENTION: G PROTEIN-COUPLED GLU
STATES OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend
STREET: One Market Plaza, Steuart Street
CITY: San Francisco
STATE: California
COUNTRY: USA
                GCAGGGCAAACGGTCGGTCAGTGCCCCCGCGTTT
                                         1250
                                                                                                1310
                                                                                                                             1182
                                                                                                                                                       1370
                                                                                                                                                                                     1242
                                                                                                                                                                                                                1430
                                                                                                                                                                                                                                            1302
                                                                                                                                                                                                                                                                       1490
                                                                                                                                                                                                                                                                                                   1362
                                                                                                                                                                                                                                                                                                                                 1550
                                                                                                                                                                                                                                                                                                                                                             1422
                                                                                                                                                                                                                                                                                                                                                                                                                    1482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1910
              1062
                                                                     1122
              8 8
                                                             දු පු
                                                                                                                           ò
                                                                                                                                              8 S
                                                                                                                                                                                                        음 강
                                                                                                                                                                                                                                                                 රි යි
                                                                                                                                                                                                                                                                                                                          중 음
                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1130 CATGATGGCAGAGCCGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGG 1189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1061
                                                          ö
                                                                                                               289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         881
                                                                                                                                           161
                                                                                                                                                                      349
                                                                                                                                                                                                   221
                                                                                                                                                                                                                             409
                                                                                                                                                                                                                                                           281
                                                                                                                                                                                                                                                                                      469
                                                                                                                                                                                                                                                                                                                    341
                                                                                                                                                                                                                                                                                                                                              529
                                                                                                                                                                                                                                                                                                                                                                           401
                                                                                                                                                                                                                                                                                                                                                                                                      589
                                                                                                                                                                                                                                                                                                                                                                                                                                   461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACCACCTGTAAGACCTGCCCTA 701
                                                                                                102 TGCCGAGTTCTGGGAGACACTTCCATTGCAAGTTGAGCCGCCACGGGCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GACATGCGGCCCACAGAACCGCACGAGCTGCCAGCCCATCCCCATCGTCAGAGTTGGA
                                                                                 42 AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAACAACATCTGGTT
                                                                                                                                                            290 TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG
                                                                                                                                                                                                                                                                        GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGCCCACGCGCTGCACGC
                                                                                                                                                                                                                                                                                                                                   470 CATGCACCGTGACCTGTGTCCTGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                               CATGATGGCAGAGCCGGACCTGTTCGCTCCGCGCGCATCTTCCTAGGGCTCGG
                                                                                                                                                                                                 AAGCCACATCAAGAAGTGCACCAACCAAGAGCGCATCGGGCTCGGCCTATGAGCA
                                                                                                                                                                                                                 350 AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                                                                                                                                                                                                                                                                                                                                          530 TGGCACCCAGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCCTGCCAGCCCGGGGAGCGAAAGAAGACTGTGAAGGGCATGCCTGCTGCTGCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1010 GCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATGAGCATCAGCTACGCGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGA
                                                                                                                                                                                                                                                           GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCCACGCCTGCACGC
                                                                                                                                                                                                                                                                                                                    CATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                                                                                                                                                                                                         TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                   TGTAACCTTCAATGAGAACGGAGGCGCACCGGGGGCGTACGACATCTACCAGTACCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACCAGACCACCTGCACCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATAGAGCGGATGCAGTGGCCAGGGAGTGGCCAGCTGCCGCGCTCCATCTGCAGTCT
                                                          Gaps
                                                        ô
                             Length 2838
                                                       Indels
                             4
                                                          4
                             8
                         Score 1707.6;
Pred. No. 0;
0; Mismatches
                          Query Match
Best Local Similarity 99.8%;
Matches 1710; Conservative
US-09-820-809-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         942
                                                                                                                                                                                                                                                                                                                    282
                                                                                                                                                                                                                                                                                                                                                                            342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           822
                                                                                                                                                                                                   162
                                                                                                                                                                                                                                                                                      410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      890
                                                                                                                                                                                                                                                           222
                                                                                                                                                                                                                                                                                                                                                                                                                                   402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   522
```

8 8 8

8 &

g ઠે g ઠે 요 δ 8 ઠે g ઠે g

```
1577
                                                                                                                                                                                                                                                                         1637
                                                                                                                                                                                                                                                                                                     1001
                                                                                                                                                                                                                                                                                                                                                                                                                   1121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1421
                                                                                                   1457
                                                                                                                                                           1517
                                                                        761
                                                                                                                                 821
                                                                                                                                                                                         881
                                                                                                                                                                                                                                              941
                                                                                                                                                 CATGATCGCCGAGACCCGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                   GCAGGGCAAACGGTCGGTCAGTGCCCCGGGTTTCATCAGCCCGGCCTCGCAGCTGGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACCTTCATCCTCATCTCCCTGCAGCTGCTCGCCATCTGCGTGTGGTTCCTGGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTCCCACTCGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTCCCACTGGGTGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998 GCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCCGAGGCGTGCCCGAGACCTTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1338 CGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCCTGTAAGACCTGCCCTA
                                                                                          GACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGA
                                                                                                                                 GTGGGACTGGCCGTGGCCGTGCTCCTCTTCCTGGCCGTGGTGGGCATCGCCGCCAC
                                                                                                                                                                                                                                                                                                       CATGATCGCAGAGCCGGACCTGGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGG
                                                                                                                                                                                                                                                                                                                                                             CATGAGCATCAGCTACGCGGCCCTGACCAAGACCGAACCGCATTTACCGCATCTTTGA
                                                                                                                                                                                                                                                                                                                                                                            CATGAGCATCAGCTACGCGGCCCTGCTGACCAAGACCGCATTAACCGCATCTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                    1062 GCAGGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CACCTTCATCCTCATCTCCCTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTGATGGTCACGTGTACTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence I, Application US/09641318; Patent No. 6384205; GENERAL INFORMATION: APPLICANT: BELACAJE, RAMA M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2238 CTACATCATCCTCTTCCA 2255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1542 CTACATCATCCTCTTCCA 1559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 4
US-09-641-318-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1122
                                                                                                                                                                                                                                                                                                                                                             1002
                                                                                                                                                                                                                                                                                                                                                                                          1698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1422
                   642
                                                                          702
                                                                                                                                  762
                                                                                                                                                             1458
                                                                                                                                                                                                                                                                                                       942
                                                                                                                                                                                                                                                                                                                                   1638
                                                                                                                                                                                                                                                                                                                                                                                                                                                  1758
                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                  원
                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                   දු පු
                                                                                              g
                                                                                                                         ò
                                                                                                                                                        셤
                                                                                                                                                                                         ò
                                                                                                                                                                                                              g
                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CATGCACCGTGACCTGTGTCCCCGCCGCGCGCACTCTGCCCTCGCATGGACCCCGTGGA 1037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGGGCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   798 TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCACTCGGCCTTTGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGGGGAAGGTGCACTTCGTGATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1038 FIGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGAACAGACCACCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAGGCGCAACATCTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             738 AGGSTTCGACCGATACTTCTCCCACGCCGCACGCTGACAACAACAACAACAACAACAACATCTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATGCACCGTGACCTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGTAACCTTCAATGAGAACGGAGACGCACCGGGGCGCTACGACATCTACCAGTACCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGTAACCTTCAATGAGAACGGAGCGCACCGGGGCGCTACGACATCTACCAGTACCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                     86.4%; Score 1516.4; DB 5; Length 2426; 99.9%; Pred. No. 0; i. Indels 0; Mismatches 1; Indels 0;
APPLICATION NUMBER: PCT/US91/09422
CLASSIFICATION: 435
PRIOR APPLICATION: 435
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US 07/672,007
FILING DATE: 18-MAR-1991
PRIOR APPLICATION NUMBER: US 07/648,481
FILING DATE: 30-JAN-1991
PRIOR APPLICATION NUMBER: US 07/626,806
FILING APPLICATION NUMBER: US 07/626,806
ATTORNEY/AGATI INFORMATION:
NAME: PATMEL STEWN NUMBER: 31,990
REFERENCE/DOCKET NUMBER: 31,990
REFERENCE/DOCKET NUMBER: 31,990
REFERENCE/DOCKET NUMBER: 31,990
REFERENCE/DOCKET NUMBER: 13952-6PC
TELEFAX: (415) 543-543
INFORMATION FOR SEQ ID NO: 20:
SEQUENCE CHARACTERISTICS:
LENGTH: 2426 base pairs
TYPE: NUCLEIC ACID
STRANDENESS: SINGIB
TOPPLOGY: Ilnear
MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 99.9
Matches 1517; Conservative
                                                                                                                                                                                                                                                                                                                                                                           ; IMMEDIATE SOURCE:
; CLONE: SR13
PCT-US91-09422-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 582
                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
```

셤 ò 셤

ઠે

a ò 유 ò 셤 ò 유 ò 셤 ò q ò 셤 ઠ

ઠ

us-10-828-332-6.rni

```
2010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2430
                                                                                                                                                                                  CGAGCCTTGCACAGGGTACCAGTACCAGGGGGGACCGCTACACCTGTAAGACGTGTCCCTA 1710
                                                                                                                                                                                                                                     1121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2550
                                                                      1542 CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGC 1601
                                                                                                                                                                  701
                                                                                                                                                                                                                                                                                                                                   881
                                                                                                                                                                                                                                                                                                                                                                                         941
                                                                                                                                                                                                                       761
                                                                                                                                                                                                                                                                            821
                                                                                                                          1471 GCGCAACGATTCTGCCGAGTACAAGGTCATTGGCTCCTGGACTGACCACCTGCACCTTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTCCCACTCGGTGGACTTCCAGGACCAGCGGACACTCGACCCCCGCTTCGCCAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCTGTTCGTGGTGACGTTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                CATGATCGCAGAGCCGGACCTGGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGG
  GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAG
                                                      CGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTA
                                                                                                                                                                                                                       CGACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATCCCCCATCGTCAAGTTGGA
                                                                                                                                                                                                                                                                                            GTTGTTCGTGGTGATCACCTTTGTGCGCTACAACGACACGCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                                                                                                                                                                          CCGGGAACTGAGCTACGTGCTGCCGGCGATCTTTCTGTGCTACGCCACTACCTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                       2011 GATGAGCATCAGCTATGCAGCCCTGCTCACCAAGACCCACCTACCGCATCTTCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTGATGGTCACGTGTACTGTGTGTACGCCATCAAGACCCCGAGGCGTGCCCGAGACCTTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTCATGGTCACGTGCACGTGTATGCCATCAAGACACGCGGGGCGTGCCCGAGACCTTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1482 GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GACGGTCTCGGTGAGTCTGAGCGCCTCGGTGTCCCTGGGAATGCTCTACATGCCCAAAGT
                                                                                                                                                                                                                                                                             GTGGGACTCGCCGTGCCGCCCCCTCTTCCTGGCCGTGGTGGCCATCGCCGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1002 CATGAGCATCAGCTACGCGGCCCTGACCAAGACCAACCGCATTTACCGCATCTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CACCTTCATCCTCATCTCCCTGCAGCTCCTCGGCATCTGCGTGTGGTTCGTGGTGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTCCCACTCGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCCGCTTTGCCAGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2431 CCCCATCTTTGGCACCTCGCAGTCGGCCGACAAGCTGTACATCCAGACGACGCT
                                                                                1531
                                                                                                           582
                                                                                                                                                               642
                                                                                                                                                                                            1651
                                                                                                                                                                                                                        702
                                                                                                                                                                                                                                                                            762
                                                                                                                                                                                                                                                                                                                                    822
                                                                                                                                                                                                                                                                                                                                                               1831
                                                                                                                                                                                                                                                                                                                                                                                         882
                                                                                                                                                                                                                                                                                                                                                                                                                    1891
                                                                                                                                                                                                                                                                                                                                                                                                                                                942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2491
 462
                                                       522
                                                                                                                                                                                                                                                                                                       1771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1182
                     g
                                                      ર્જ
                                                                         셤
                                                                                                        õ
                                                                                                                               ద
                                                                                                                                                         ે
                                                                                                                                                                                    셤
                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                               ઠ
                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         名
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1051 AGGCTTCGACCGCTACTTCTCCAGCCGCACGCTCGACAACCGGCGACAACTCTGGTT 1110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1111 TGCCGAGTTCTGGGAGGACAACTTCCACTGCAAGCTGAGCCGCCCACGCCCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCCATGGGCCACGCCTGCACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGAGGGGAAGGTGCAGTTTGTGATCGATGCCGTGTACGCCATGGCCCACGCGCTGCACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATGCACCGTGACCTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAGGCGCAACATCTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    102 TGCCGAGTTCTGGGAGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          162 AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 °,
OF INVENTION: EXCITATORY AMINO ACID RECEPTOR PROTEIN AND RELATED NUCLEIC ACID COMPOUNDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 3; Length 3431;
                                                                                                                     ZIF: 46285
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION DATA:
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 83.8%; Score 1470.8; DB 3; Length Best Local Similarity 91.1%; Pred. No. 0; Matches 1562; Conservative 0; Mismatches 152; Indels
                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/816,178A

ATTORNEY/AGENT INFORMATION:

NAME: GAYLO, PAUL J.

REGISTRATION NUMBER: 36,808

REGISTRATION NUMBER: 36,808

REFERENCE/DOCKET NUMBER: X-10579

TELECOMMUNICATION INFORMATION:

TELENOM: (317) 276-3861

INFORMATION FOR SEQ ID NO: 1:

SEQUENCE CHARACTERISTICS:

LENGTH: 343 base pairs
                        NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSEE: BLI LILLY AND COMPANY
STREET: LILLY CORPORATE CENTER
CITY: INDIANAPOLIS
STATE: INDIANA
COUNTRY: UNITED STATES OF AMERICA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: CDS
LOCATION: 26..2761
SEQUENCE DESCRIPTION: SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: linear MOLECULE TYPE: cDNA FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-641-318-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  402
```

요

ઠે

g ઠે g ò g ઠે 요 ઠે 요 ઠે 셤

ઠે

φ

유

g

à

g ઠે 셤

ð

```
1410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2250
                                                                                                       1290
                                                                                                                                                                                                                                                                                                         CARCCUUGCACAGGUACCAGUACCAGGGGCCGCUACACCUGUAAGACGUGUCCCUA 1710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                    341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        221
                                                                       281
                                                                                                                                                                                                                 401
                                                                                                                                                                                                                                                                                        461
                                                                                                                                                                                                                                                                                                                                                              521
                                                                                                                                                                                                                                                                                                                                                                                                                                   581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       941
                                                                                                                                                               GCAGGGCAAACGGTCGGTCAGTGCCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACCTTCATCCTCATCTCCCTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTCCCACTCGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                       GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGC
                                                                                                                                              CATGCACCGTGACCTGTGTCCCGGCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                                                   TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                                                                                                                                                                                        TGTAACCTTCAATGAGAACGGAGCGCACCGGGCGCTACGACATCTACCAGTACCAACT
                                                                                                                                                                                                                                                                                                                                                              GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCCTGCCAGCCCGGGGAGGAAGAAGACTGTGAAGGCCATGCCTTGCTGCTGCCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       702 CGACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gradaacreacearacearacracecererrecraseceraseacareaceac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTGTTCGTGGTCACGTTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCGGGAACTGAGCTACGTGCTGCTGCGGCGCATTTTTCTGTGCTACGCCACTACCTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CATGATCGCAGAGCCGGACCTGGCGCTCTCGCTCCGCCCCATCTTCCTAGGGCTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATGAGCATCAGCTACGCGGCCCTGCTGACCAAGACCGCATTTACCGCATCTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                   AATAGAGCGGATGCAGTGGCCAGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCT
                                   1111
                                                                                                                                                                                                                                                     1351
                                                                                                                                                                                                                                                                                        402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1182
 162
                                                                       222
                                                                                                          1231
                                                                                                                                              282
                                                                                                                                                                                 1291
                                                                                                                                                                                                                     342
                                                                                                                                                                                                                                                                                                                                                                  462
                                                                                                                                                                                                                                                                                                                                                                                                                                     522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                          g
                                                                                                                                                                      원
                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                            8 S
                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                       8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .
                                                                                                                                                1170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | TGCCGAGTTCTGGGAGGAGACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG
cercerracececcaccarerecaacaacricacecaaaaagaecaacricegeceaa
                                                                                                                               TGGGGAAGCCAAATCAGAGCTGTGTGAGAACCTGGAGACCCCCAGCGCTGGCTACCAAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACACAACAACATCTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: BELAGAJE, RAMA M.
WU, SU
TITLE OF INVENTION: EXCITATORY AMINO ACID RECEPTOR PROTEIN
AND RELATED NUCLEIC ACID COMPOUNDS
NUMBER OF SEQUENCES: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 3431;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: 18M PC compatible
COMPUTER: 18M PC compatible
ODERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/641,318
FILING DATE: 18-Aug-2000
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US/09/816,178A
FILING DATE: 1D-MAR-1997
ATTORNEY/AGENT INFORMATION:
NAME: GAYLO, PAUJ. J.
FEFERTATION NUMBER: X-10579
TELECOMMUNICATION INFORMATION:
TELECOMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match

83.8%; Score 1470.8; DB 3; Length
Best Local Similarity 74.2%; Pred. No. 0;
Matches 1271; Conservative 291; Mismatches 152; Indels
                                                                                                                                                                                                    GACCTACGTCACCTACCCAACCATGCCATCTAG 1755
                                                                                                                                                                                                                     STATE: INDIANA
COUNTRY: UNITED STATES OF AMERICA
ZIP: 46285
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPANY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
ADDRESSER: ELI LILLY AND COMPAI
STREET: LILLY CORPORATE CENTER
CITY: INDIANAPOLIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE DESCRIPTION: SEQ ID NO: 3:
                                                                                                                                                                                                                                                                                                                            Sequence 3, Application US/09641318 Patent No. 6384205 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 3431 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: linear
ULE TYPE: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE
                                                                                                                                                                                                                                                                                                             US-09-641-318-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-641-318-3
                                                                                         2611
                                                                                                                                                                                                                                      2731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1051
                      2551
                                                        1602
                                                                                                                               1662
                                                                                                                                                                                                    1722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           102
```

셤 ઠે g

ò

요 ઠે

ઠ 윱 ઠે g ò 셤 ઠે g Š g ò a ઠે

```
1736 GCCCTGCCAACCGGGTGAGCGGAAGAAGAAGAAGGGGATGCCTTGCTGCTGGCACTG 1795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1796 CGAGCCTTGCACAGGGTACCAGGTGGACCGCTACACACTGTAAGACGTGTCCCTA 1855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1976 GTTGTTCGTGGTGATCACCTTTGTGCGCTACAACGACACGCCCATCGTCAAGGCCTCGGG 2035
                                                                                                                                                                                                                                                                                                                                                                                                                                                            1496 TGGCACCCCAGCTGCTTAAGTACATCCGAAACGTCAACTTCTCAGGCATCGCAGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGGCACCCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGTAACCTTCAATGAGAACGGAGGCGCCCCGGGGCGCTACGACATCTACCAGTACCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGTGACCTTCAATGAGAATGGAGATGCGCCTGGGCGCTATGACATCTACCAATACCAGCT
                                                                                                                                                                                                                                                                                                              TGCCGAGTTCTGGGAGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCCATGGGCCACGCGCTGCACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCGGGAACTGAGCTACGTGCTGCTGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCT
                                                                                                                                                                                                                                              42 AGGGTTCGACCGATACTTCTCCAGCGGCACGCTGGACAACAACAGGGCGAACATCTGGTT
                                                                                                                                                                                                                                                                                                                                                                             162 AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCCTGCCAGCCCGGGGAGCGAAAGAAGACTGTGAAGGGCATGGCTTGCTGCTGGCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACACCTGTAAGACCTGCCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             762 GTGGGACTCGCCGTGGCCGTGCCCCTTTCCTGGCCGTGGTGGCCATCGCCGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     522 AATAGAGCGGATGCAGTGGCCAGGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGA
                                                                                                                                                                                                                  Gapa
                                                                                                                                                                                    Length 3884;
                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                  152; Indels
                                                                                                                                                                                     4
                                                                                                                                                                                  ΩB
                                                                                                                                                                                Score 1470.8;
Pred. No. 0;
0; Mismatches
        1074:
 ; INFORMATION FOR SEQ ID NO: 10° SEQUENCE CHARACTERISTICS: LENGTH: 3884 base pairs TYPE: nucleic acid STRANDEDNESS: single TOPOLOGY: linear immediate SOURCE: LIBRARY: GENBANK CLONE: 91160182
                                                                                                                                                                                Query Match
Best Local Similarity 91.1%;
Matches 1562; Conservative
                                                                                                                                                                                                                                                                                                              102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             822
                                                                                                                                                                                                                                                                                                                                                                                                                                           222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            882
                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                   යු
                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                 2370
                                                                                                                                                 2430
                                                                                                                                                                                  1481
                                                                                                                                                                                                                                             1661
2431 CCCCAUCUUGGCACCUCGCAGUCGGCCGACAAGCUGUACAUCCAGACGACGACGCU 2490
                                                                                                                                                                                                                                                                                                                             GCTGATGGTCACGTGTACTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAA 1361
                                                                                                                                                                                                                                                                                                            CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGC 1601
                                                                                                                                                                                                                                                                                                                                                                                                                                         1662 TGGGGAAGCCAAATCAGAGCTGTGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACA 1721
                                                                    2371 UGAGGCCAAGCCCAUUGGCUUCACCAUGUACACCACUUGCAUCGUCUGGCUUGGCCUUCAU
                                                                                                                                                                               CGTGGTCACCGCCGCCACCATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1074, Application US/09016434
| Patent No. 650038
| GENERAL INFORMATION:
| APPLICANT: Janice Au-Young | APPLICANT: Janice Au-Young | TITLE OF INVENTION: COMPOSITION FOR THE DETECTION OF SIGNALING | TITLE OF INVENTION: PATHWAY GENE EXPRESSION | NUMBER OF SEQUENCES: 1490 | CORRESPONDENCE ADDRESS:
| ADDRESSEE: INCYTE PAITO | STREET: J174 PORTER DRIVE | STREET: GALIFORNIA |
| COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 94304
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WORD PERfect 6.1 for Windows/MS-DOS
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/016,434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1722 GACCTACGTCACCTACACCATGCCATCTAG 1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Zeller, Karen J.
REGISTRATION NUMBER: 37,071
REPERENCE/DOCKET NUMBER: PA-0002 US
TELECOMMUNICATION INFORMATION:
TELEPHONE: (650) 855-0555
TELEFAX: (650) 845-4166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: HEREWITH
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 6
US-09-016-434-1074
                                                                                                                 1362
                                                  1302
                                                                                                                                                                               1422
                                                                                                                                                                                                                                                                                                            1542
                                                                                                                                                                                                                                                                                                                                                                          1602
```

1435

161

341

401

1675

521

581

641

701

761

821

881

941

1615

us-10-828-332-6.rni

```
2.1
                                                     Query Match
Best Local Similarity 91.1:
Matches 1562; Conservative
; SOFTWARE: Patentin Ver. 2; SEQ ID NO 14; LENGTH: 3884
; TYPE: DNA; ORGANISM: HOMO SADIENS
                                 ; ORGANISM: Ho
US-09-820-809-14
                                                                                                                                                                                                                     1436
                                                                                                                                                                                                                                                                               1556
                                                                                                                                                                                                                                                                                                                                        1676
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2036
                                                                                                 1196
                                                                                                               102
                                                                                                                                                                         222
                                                                                                                                                                                        1376
                                                                                                                                                                                                       282
                                                                                                                                                                                                                                   342
                                                                                                                                                                                                                                                  1496
                                                                                                                                                                                                                                                                 402
                                                                                                                                                                                                                                                                                              462
                                                                                                                                                                                                                                                                                                            1616
                                                                                                                                                                                                                                                                                                                          522
                                                                                                                                                                                                                                                                                                                                                       582
                                                                                                                                                                                                                                                                                                                                                                      1736
                                                                                                                                                                                                                                                                                                                                                                                     642
                                                                                                                                                                                                                                                                                                                                                                                                    1796
                                                                                                                                                                                                                                                                                                                                                                                                                  702
                                                                                                                                                                                                                                                                                                                                                                                                                                              762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     942
                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ద
                                                                                                                                                                                                                                                                         음
                                                                                                                                                                                                                                                                                         8686
                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                 중 읍
                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                              셤
                                                                                                                          셤
                                                                                                                                           ठ व ठ
                                                                                                                                                                                   8 & 8
                                                                                                                                                                                                                             ⋧
                                                                                                                                                                                                                                             6 B
                                                                                   ઠ
                                                                                                           ∂
                                                            2215
                                                                                                        1181
                                                                                                                                                    2395
                                                                                                                                                                                                              2515
                                                                                                                                                                                                                           1421
                                                                                                                                                                                                                                                                        2635
                                                                                                                                                                                                                                                                                       1541
                                                                                                                                                                                                                                                                                                     2695
                                                                                                                                                                                                                                                                                                                   1601
                                                                                                                                                                                                                                                                                                                                                1661
                                                                            1121
                                                                                                                                                                   1301
                                                                                                                                                                                                1361
                                                                                                                                                                                                                                                         1481
                                                                                                                                                                                                                                                                                                                                                               cercerraceececcaccarerccaacaaerrcacecaeaaaeecaaacrrceeccaa 2815
                                                                                                                                                                                                                                                                                                                                                                              1721
                                                                                                                                                                                                                                                                                                                                                                                     2036 CCGTGAACTGAGCTACGTGCTGCTGGCAGCATCTTCCTGTGCTATGCCACCACCTTCCT 2095
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 14, Application US/09820809
Sequence 14, Application US/09820809
Patent No. 6608176
GENERAL INFORMATION:
TENTEMATICANT: CHAUDHARI, NIRUPA
APPLICANT: CHAUDHARI, STEPHEN D.
TITLE OF INVENTION: TTASTE RECEPTOR FOR UNAMI (MONOSODIUM GLUTAMATE) TASTE
FILE REFERENCE: 703/3/275556
CURRENT APPLICATION NUMBER: US/09/820,809
CURRENT FILING DATE: 2001-03-30
PRIOR PILING DATE: 2000-03-31
NUMBER OF SEQ ID NOS: 14
                                                                                                        GCAGGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGGGGGCGTT
                                                                                     CATGATCGCAGAGCCGGACCTGGTCGCTCCGCCGCATCTTCCTAGGGCTCGG
                          GATGAGCATCAGCTATGCAGCCCTGCTCACCAAGACCAACCGCATCTACCGCATCTTCGA
                                                                                                                                      CTCCCACTCGGTGGACTTCCAGGACCAACGGACACTTGACCCCCCGCTTTGCCAGGGG
                                                                                                                                                                          GCTGATGGTCACGTGTACTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAA
                                                                                                                                                                                                       CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACT
                                                                                                                                                                                                                                                                   CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGC
                                                                                                                                                                                                                                                                                                                            CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGCGTCAAAGC
                                                                                                                                                                                                                                                                                                                                                 CGTGGTCACCGCCACCATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAA
                                                                                                                                                                                                                                                                                                                                                                              TGGGGAAGCCAAATCAGAGCTGTGAGAACCTGGAGACCCCCAGCGCTGGCTACCAAACA
                                               GACCTACGTCACCTACACCAACCATGCCATCTAG 1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 7
US-09-820-809-14
                                               1002
                                                                                          2216
                                                                                                                       2276
                                                                                                                                       1182
                                                                                                                                                     2336
                                                                                                                                                                                                               2456
                                                                                                                                                                                                                            1362
                                                                                                                                                                                                                                           2516
                                                                                                                                                                                                                                                           1422
                                                                                                                                                                                                                                                                         2576
                                                                                                                                                                                                                                                                                       1482
                                                                                                                                                                                                                                                                                                     2636
                                                                                                                                                                                                                                                                                                                    1542
                                                                                                                                                                                                                                                                                                                                   2696
                                                                                                                                                                                                                                                                                                                                                  1602
                                                                                                                                                                                                                                                                                                                                                                 2756
                                                                                                                                                                                                                                                                                                                                                                               1662
                                                                                                                                                                                                                                                                                                                                                                                             2816
                                2096
                                                             2156
                                                                            1062
                                                                                                         1122
                                                                                                                                                                   1242
                                                                                                                                                                                                1302
                                                                                                                                                                                                                                                                                                                                                                                                           1722
                 942
                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                  요 등
                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                         g
                            8 8 8 8
                                                                                       g
                                                                                                        8 8 8
                                                                                                                                                 8 6 8
                                                                                                                                                                                            र्व क्षे
                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                           ò
             8
```

```
1315
                                                                                                                                                 1375
                                                                                                                                                                                              1435
                                                                                                                                                                                                                                       1495
                                                                                                                                                                                                                                                                                                                             1615
                                                                                                                                                                                                                                                                                                                                                                      1675
                                                                                                                                                                                                                                                                                                                                                                                                               1735
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2095
                                                                 1255
                                                                                                                                                                                                                                                                                  1555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATGATGGCAGAGCCGACCTGGGGGACTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGG 1001
                       ö
                                                                                     161
                                                                                                                                221
                                                                                                                                                                          281
                                                                                                                                                                                                                    341
                                                                                                                                                                                                                                                             401
                                                                                                                                                                                                                                                                                                        461
                                                                                                                                                                                                                                                                                                                                                  521
                                                                                                                                                                                                                                                                                                                                                                                            581
                                                                                                                                                                                                                                                                                                                                                                                                                                      641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        941
                                                                                                                                              CATGCACCGGGACCTGTGTCCCGGCGGGGGGGCTCTGCCCGCGCTGGACCCTGTAGA
                                                                                                                                                                                                                                                                         GCCCTGCCAACCGGGTGAGCGGAAGAAGACAGTGAAGGCCATGCCTTCCTGCTGGCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGAGCCCTGCACCGGGTACCAGTGCAAGTGGACCGCTACACGTGTAAGACCTGCCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGTAACCTTCAATGAGAACGGAGCGCACCGGGGCGCTACGACATCTACCAGTACCAACT
                                                                                                                                                                                                                                                                                                                    GTGGGACTCGCCGTGGCCGTGCTCCTCCTGGCCGTGGTGGGCATCGCCGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG
                                                                                                                                162 AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                                                                                                                                                                    TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGAACCC
                                                                                                                                                                                                                                                                                                                                                  GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATCGTCAAGTTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCGGGAACTGAGCTACGTGCTGCTGGCGGCATCTTTCTGTGCTACGCCACTACCTTCCT
                                             AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAGGCGCAACATCTGGTT
                       Gaps
  Length 3884;
                       ö
                       Indels
  DB 4;
                       0; Mismatches 152;
Score 1470.8;
Pred. No. 0;
 83.8%;
91.1%;
```

윱 ઠે g ઠે 8 è 셤 ò a ઠે a ઠે 셤 ઠે QQ ઠે a ઠે g

```
1325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1446 GCGCAACGATTCTGCCGAGTACAAGGTCATTGGCTCCTGGACTGACCTGCACCTTAG 1505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1626 CGAGCCTTGCACAGGGTACCAGTACCAGGTGGACCGCTACACACTGTAAGACGTGTCCCTA 1685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1865
                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1026 AGGCTTCGACCGCTACTTCTCCAGCCGCACGACAACAACGACGCGCGACATCTGGTT 1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1086 TGCCGAGTTCTGGGAGGACAACTTCCACTGCAAGCTGAGCCGCCCACGCCCTCAAGAAGGG 1145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1566 GCCTGCCAACCGGGTGAGCGGAAGAGAGAGAGGGCATGCCTTGCTGCTGCCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGCACCCCAGCTTAAGTACATCCGAAACGTCAACTTCTCAGGCATCGCAGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ANTAGAGCGGATGCACTGGCCGGGGAGCGGCAGCAGCTGCCCCGCTCCATCTGCAGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCCACGCGCTGCACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATGCACCGTGACCTGTGTCCCGGCGTAGGACTCTGCCCTCGCATGGACCCCCGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATGCACCTGACCTGTGTCCCCGCCTGGGGTTTTGTCTCTGCCCGCGCATGGACCCTGTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTGACCTTCAATGAGAATGGGAATGCGCCTGGGCGCTATGACATCTACCAATACCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTTGTTCGTGGTGATCACCTTTGTGCGCTACAACGACACGCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCCACGCGCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGTAACCTTCAATGAGAACGGAGACGCACCGGGGCGCTACGACATCTACCAGTACCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCCTGCCAGCCCGGGGAGCGAAAGAAGACTGTGAAGGGCATGGCTTGCTGCTGGCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Grassactoscostoscostoscocortectoscostostoscostoscostoscostos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCTGTTCGTGGTCACGTTTGTGCGCTACAACGATACCCCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     162 AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AATAGAGCGGATGCCAGCCAGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                Length 2736;
                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                     DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                 152;
                                                                                                                                                                                                                                                                                                                                                Score 1467.8; Pred. No. 0; 0; Mismatches
                         93810663
                                                                                                                                                                                                                                                                                                                              83.6%; Scc.
91.1%; Pred
0; F
RARLIER FILING DATE: 1994-08-19
REALLIER APPLICATION NUMBER: EPO 93
RARLIER FILING DATE: 1993-09-20
NUMBER OF SEQ ID NOS: 26
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 1
LENGTH: 2736
                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                         TYPE: DNA ORGANISM: Homo sapiens
                                                                                                                                                                                                                                              ) NAME/KEY: CDS
) LOCATION: (1)..(2736)
US-08-617-785-1
                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Simil
Matches 1559; C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1806
                                                                                                                                                                                                                                                                                                                                                                                                                                                    42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        822
                                                                                                                                                                                                                          FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    음 장
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ដ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1, Application US/08617785E

Patent No. 6228610

GENERAL INFORMATION:

APPLICANT: Flor, Peter J.

APPLICANT: Flor, Peter J.

APPLICANT: Futcher, Krieten

APPLICANT: Futcher, Trene

APPLICANT: White Selated DNA Compounds

FILE REFERENCE: 4-19679/A/PCT

CURRENT APPLICATION NUMBER: US/08/617,785E

CURRENT PILING DATE: 1996-03-19

EARLIER APPLICATION NUMBER: EPO/9416553.7
                                                                                                    2215
                                                                                                                                               1121
                                                                                                                                                                                              2275
                                                                                                                                                                                                                                                    1181
                                                                                                                                                                                                                                                                                             2335
                                                                                                                                                                                                                                                                                                                                                   1241
                                                                                                                                                                                                                                                                                                                                                                                                   2395
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1721
     2096 CATGATCGCTGAGCCCGACCTTGGCACCTGCTCGCTGCGCGGAATCTTCCTGGGACTAGG 2155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1542 CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGC 1601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGTGGTCACCGCCCCCCATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAA 1661
                                                                                                                                             2396 TGTGCTCAAGTGTGACATCTCGGACCTGTCGCTCATCTGCCTGGTGGGCTACACGTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2456 GCTCATGGTCACGTGCACCGTGTATGCCATCAAGACACGCGGGCGTGCCCGAGACCTTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCCATCTTCTTTGGCACCTCGCAGTCGGCCGACAAGCTGTACATCCAGACGACGACGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GACGGTCTCGGTGAGTCTGAGCGCCTCGGTGTCCCTGGGAATGCTCTACATGCCCCAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTACATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGGCGCAAGCGCAAGCGCAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGTCGTTACGGCGGCCACCATGTCCAACAAGTTCACGCAGAAGGGCAACTTCCGGCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1662 TGGGGAAGCCAAATCAGAGCTGTGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGAGAGGCCAAGTCTGAGCTCTGAGAACCTTGAGGCCCCAGCGCTGGCCACACAAACA
                                                   CATGAGCATCAGCTACGCGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGA
                                                                                  CACCTTCATCCTCATCTCCCTGCAGCTGCTCGCCATCTGCGTGTGGTTCGTGGTGGACCC
                                                                                                                                                                                                                                                                                               2276 caccificaccicatorocoracidos de caracidades de 
                                                                                                                                                                                                                                                                                                                                                   2336 creceaeregregregaerrecagaeceaegaeaeaerecaececeeerrege
                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACCTACGTCACCTACACCAACCATGCCATCTAG 1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 8
US-08-617-785-1
                                                                                                 2156
                                                                                                                                                                                                                                                 1122
                                                                                                                                                                                                                                                                                                                                                   1182
                                                                                                                                                                                                                                                                                                                                                                                                                                                  1242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1722
                                                     1002
```

8 8 8

원 ઠે 요 ઠે g

```
Query Match
Best Local Similarity 91.1%;
Matches 1559; Conservative
                                                                                                            TYPE: DNA ORGANISM: Homo sapiens
                                                                                                                                    , NAME/KEY: CDS
; LOCATION: (1)..(2736)
US-09-817-464-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         642
                                                                                                                                                                                                        42
                                                                                                                                                                                                                                          102
                                                                                                                                                                                                                                                                                             1146
                                                                                                                                                                                                                                                                                                              222
                                                                                                                                                                                                                                                                                                                               1206
                                                                                                                                                                                                                                                                                                                                               282
                                                                                                                                                                                                                                                                                                                                                               1266
                                                                                                                                                                                                                                                                                                                                                                                                                   402
                                                                                                                                                                                                                                                                                                                                                                                                                                                    462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1686
                                                                                                                              FEATURE
                                                                                                                                                                                                                                                                                                       $ 8 $ 8 $
                                                                                                                                                                                                                                                                                                                                                                                            8 & 8
                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                영 장
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                         ઠ
                                                                                                                                                                                                                    8 8 8
                                                                                                                                                                                                                                                                          8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ठ
                                                                                                                                     1181
                                                                                                                                                                                                                                                                            1421
                                                                                                                                                                                                                                                                                             2405
                                                                                                                                                                                                                                                                                                                                                                               1601
                                                                                                                                                                                                                                                                                                                                                                                                                  1661
                                                                                                   1121
                                                                                                                                                       2165
                                                                                                                                                                        1241
                                                                                                                                                                                        2225
                                                                                                                                                                                                        1301
                                                                                                                                                                                                                          2285
                                                                                                                                                                                                                                                           2345
                                                                                                                                                                                                                                                                                                               1481
                                                                                                                                                                                                                                                                                                                               2465
                                                                                                                                                                                                                                                                                                                                                               2525
                                                                                                                                                                                                                                                                                                                                                                                                 2585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2705
                                                                  1061
                                                                                                                                                                                                                                          1361
                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGGGGAAGCCAAATCAGAGCTGTGTGAGAACCTGGAGACCCCAGGGGTGGCTACCAAACA 1721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 0, Application US/09817464

Petent No. 6515107

GENERAL INFORMATION:

APPLICANT: Flor, Peter J.

APPLICANT: Lindaur, Kristen

APPLICANT: Futnner, Irene

APPLICANT: Knopfel, Thomas

TITLE OF INVENTION: Human Metabotropic Glutamate Receptor Subtypes (HWR4,
                                                                                                                                                                      CACCTTCATCCTCATCTCCCTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGACCC
                                                                                                                                                                                                                                                   CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                  CGTGGTCACCGCCGCCACCATGTCCAACAAGACACAGAAGGGCAACTTCAGGCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                               CGTCGTTACGGCGGCCACCATGTCCAAGAAGTTCACGCAGAAGGGCAACTTCCGGCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCGTGAACTGAGCTACGTGCTGCTGCTGCATCTTCCTGTGCTATGCCACCACCACCTTCCT
                                 CATGATCGCAGAGCCGGACCTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGCCTCGG
                                          CATGATCGCTGAGCCCGACCTTGGCACCTGCTCGCTGCGCCGAATCTTCCTGGACTAGG
                                                                  CATGAGCATCAGCTACGCGGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGA
                                                                           GATGAGCATCAGCTATGCAGCCCTGCTCACCAAGCCCAACCGCATCTACCGCATCTTCGA
                                                                                                    GCAGGCCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCAT
                                                                                                              GCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACACCTTCAA
                                                                                                                                                                                                                                                                             CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACA
                                                                                                                                                                                                                                                                                                                         CCCCATCTTCTTTGCCACCTCGCAGTCGGCCGACAAGCTGTACATCCAGACGACGACGCT
                                                                                                                                                                                                                                                                                                                                                GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGT
                                                                                                                                                                                                                                                                                                                                                          CTACATCATCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGCCTCAAAGC
CCGGGAACTGAGCTACGTGCTGCTGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACTTACGTCACTTACACCAACCATGCAATC 2736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACCTACGTCACCTACACCAACCATGCCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-817-464-1
                1866
                                                                 1002
                                                                                  1986
                                                                                                                    2046
                                                                                                                                      1122
                                                                                                                                                       2106
                                                                                                                                                                        1182
                                                                                                                                                                                                          1242
                                                                                                                                                                                                                                                           2286
                                                                                                                                                                                                                                                                             1362
                                                                                                                                                                                                                                                                                                                                                                                                  2526
                                                                                                                                                                                                                                                                                                                                                                                                                   1602
                                                                                                                                                                                                                                                                                                                                                                                                                                    2586
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2646
                                 942
                                                  1926
                                                                                                    1062
                                                                                                                                                                                        2166
                                                                                                                                                                                                                                           1302
                                                                                                                                                                                                                                                                                                              1422
                                                                                                                                                                                                                                                                                                                               2406
                                                                                                                                                                                                                                                                                                                                                1482
                                                                                                                                                                                                                                                                                                                                                                 2466
                                                                                                                                                                                                                                                                                                                                                                                1542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2706
882
                                                                              g
                                                                                                   δ
                                                                                                                q
                                                                                                                                ઠે
                                                                                                                                                   8 & 8
                                                                                                                                                                                                    ð
                                                                                                                                                                                                                      임
                                                                                                                                                                                                                                     ያ ያ
                                                                                                                                                                                                                                                                         8 8 8 8
                                                                                                                                                                                                                                                                                                                                                          원 장
                                                                                                                                                                                                                                                                                                                                                                                              요
                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                               요
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
ò
              g
                                ઠે
                                            යි යි
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
```

```
1145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCGCAACGATTCTGCCGAGTACAAGGTCATTGGCTCCTGGACTGACCACCTGCACCTTAG 1505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1026 AGGCTTCGACCGCTACTTCTCCAGCCGCACGCTGGACAACCGGCGCAACATCTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGCCACGTCAAGAAGTGCACCACCGTGAGCGAATTGGGCAGGATTCAGCTTATGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATGCACCGTGACCTGTGTCCCGGCCGCGTGGGGCTTTGCCCCGCGCATGGACCCTGTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGGGGAAGGTGCAGTTTGTGATCGATGCCGTGTACGATGGCCATGGGCCACGCGCTGCACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCGTCGCCTCGGCCTGGACTCCGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGTAACCTTCAATGAGAACGGAGACGCACCGGGGCGCTACGACATCTACCAGTACCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AATAGAGCGGATGCCAGGCCAGGCAGCCAGCAGCTGCCGCGCTCCCATCTGCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCCTGCCAGCCCGGGGAGCGAAAGAAGACTGTGAAGGGCCATGGCTTGCTGCTGCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               162 AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGGGGAAGGTGGTGTTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAACAACAACATCTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                    DB 4; Length 2736;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
Compounds
                                                                                                                                                                                                                                                                                                                                                                                                                    Score 1467.8; DB 4;
Pred. No. 0;
0; Mismatches 152;
DNA
          CURRENT APPLICATION NUMBER: US/09/017,464
CURRENT APPLICATION NUMBER: US/09/017,464
CURRENT FILING DATE: 2001-03-26
EARLIER PELICATION NUMBER: US/08/617,785
EARLIER PILING DATE: 1996-03-19
EARLIER APPLICATION NUMBER: EPO 9416553.7
EARLIER APPLICATION NUMBER: EPO 93810663.0
EARLIER PILING DATE: 1993-09-20
NUMBER OF SEQ ID NOS: 26
SOFTWARE: PATENTING NATE: 1993-09-20
NUMBER OF SEQ ID NOS: 26
SOFTWARE: PATENTING NATE: 1993-09-20
SOFTWARE: PATENTING NATE: 1993-09-20
SEQ ID NO SEQ ID NO 1
LENGTH: 2736
HMR7) and Related
```

ö

```
1155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1156 GCCGAGTTCTGGGAAGAGAATTTTAACTGCAAACTGACCAGCTCAGGTACCCAGTCAGAT 1215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGA 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     163 AGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCCATGGGCCACGCGCTGCACGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1336 Arigicaciona de contrado de contra de contrado de contrador de contrado d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAGGCGCAACATCTGGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1096 GGATTTGACCAGTACTTCATGACTCCCTGGAGAACAACCGCAGGAACATCTGGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     283 ATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 2961;
                   APPLICANT: Dagget, Lorrie
APPLICANT: Dagget, Lorrie
APPLICANT: Lu, Chin-Chun
TITLE OF INVENTION: HUMAN METABOTROPIC GLUTAMATE RECEPTOR
TITLE OF INVENTION: SUBTYPE MGLUR6, NUCLEIC ACIDS ENCODING ITLE OF INVENTION: THEREOF
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: Pretty, Schroeder, Brueggemann & Clark
STREET: 444 South Flower Street, Suite 2000
CITT: Los Angeles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION: 85..2718
OTHER INFORMATION: /product= "Human Metabotropic
OTHER INFORMATION: Glutamate Receptor Subtype mGluR6'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 50.2%; Score 880.6; DB 2; Best Local Similarity 72.5%; Pred. No. 1.1e-192; Matches 1156; Conservative 0; Mismatches 430;
                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

MEDIUM TYPE: Floppy disk

COMPUTER: ISM PC compactible

COMPUTER: ISM PC compactible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Betentin Release #1.0, Ver

CURRENT APPLICATION DATA:

PILING DATE:

CLASSIFICATION NUMBER: US/08/407,875

FILING DATE:

CLASSIFICATION:

NAME: Relect, Stephen E.

REGISTRATION NUMBER: P41 9921

TELECOMULNICATION NUMBER: P41 9921

TELECOMULNICATION NUMBER: P41 9921

TELECOMULNICATION INFORMATION:

TELECOMULNICATION INFORMATION:

TELECOMULNICATION INFORMATION:

TELECOMULNICATION INFORMATION:

TELECOMULNICATION OF SEQ 10 NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
LENGTH: 2961 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: nucleic acid
STRANDEDNESS: both
TOPOLOGY: both
MOLECULE TYPE: cDNA
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: CDS
                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                         ర
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-407-875-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                   1865
                                                                                                                                                                                                                                                                                                               1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2525
                           GCAGGGCAAACGGTCGGTCAGTGCCCCGGGTTTCATCAGCCCGGCCTCGCAGCTGGCCAT 1121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CACCTTCATCCTCATCTCCCTGCAGCTGCTCGCATCTGCGTGTGTTCGTGGTGGACCC 1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGC 1601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGTGGTCACCGCCGCCACCATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAA 1661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1662 TGGGGAAGCCAAATCAGAGCTGTGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAAA 1721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2705
                                                                                                     881
                                                                                                                                                                                                          941
                                                                                                                             GTTGTTCGTGGTGATCACCTTTGTGCGCTACAACGACGCCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                  CGGGAACTGAGCTACGTGCTGCTGCAGCATCTTCCTGTGCTATGCCACCACCTTCCT
                                                                                                                                                                                                                                                                                                            CATGATCGCAGAGCCGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2286 GCTCATGGTCACGTGCACCGTGTATGCCATCAAGACACGCGGGGGGGCCCGAGACCTTCAA
                                                                                                                                                                                                                                                                                                                                                   CATGATCGCTGAGCCCCGACCTTGGCACCTGCTCGCTGCCCGAATCTTCCTGGGACTAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTCCCACTCGGTGGTGGACTTCCAGGACCAGCGGACACTCGACCCCCGCTTCGCCAGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                    CATGAGCATCAGCTACGCGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2046 GCAGGGCAAGCGCTCGGTCAGGCCCCACGCTTCATCAGCCCCCGCCTCACAGCTGGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGTGCTCAAGTGCGACATCTCGGACGTGTCCCTCATCTGCCTGGTGGGCTACAGCATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2406 CCCCATCTTTGGCACCTCGCAGTCGGCCGACAAGCTGTACATCCAGACGACGACGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GACGGTCTCGGTGAGTCTGAGCGCCTCCGTGGGAATGCTCTACATGCCCAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                        GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGTCGTTACGGCGGCCACCATGTCCAACAAGTTCACGCAGAAGGGCAACTTCCGGCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                          CCGGGAACTGAGCTACGTGCTGCGGGGCATCTTTCTGTGCTACGCCACTACCTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACT
                                                                                                                                                   1806
                                                                                                                                                                                                                                                           1866
                                                                                                                                                                                                                                                                                                            942
                                                                                                                                                                                                                                                                                                                                                                                                                    1002
                                                                                                  822
                                                                                                                                                                                                       882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1422
                                                                                               ઠે
                                                                                                                                        ద
                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                     요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
```

403

음 &

Sequence 1, Application US/08407875 Patent No. 5912122

RESULT 10 US-08-407-875-1

```
APPLICANT: Dagget, Lorrie
Lu, Chin-Chun
TITLE OF INVENTION: HUMAN METABOTROPIC GLUTAMATE RECEPTOR
STUBLYPE MGLUR6, NUCLEIC ACIDS ENCODING SAME AND USES
THEREOF
                                                                 2655
   2536 ACCACGCTAACCGTGTCCTTGAGCCTGAGTGCCTCGGTGTCCCTCGGCATGCTCTACGTA 2595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGATTTGACCAGTACTTCATGACTCGATCCCTGGAGAACAACCGCAGGAACATCTGGTTC 1155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCCACGCGCTCAAGAAGGGA 162
                                   CCCAAAGTCTACATCCTCTTCCACCCGGAGCAGAACGTGCCCCAAGCGCAAGCGCAGT
                                                               cccaaaacciacgicarccircirccarccagaggagaaaggagaaagggaaag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACACAGGCGCAACATCTGGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .
6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 2961;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCATION: 85.2718

GTHER INFORMATION: /product= "Human Metabotropic;
Glutamate Receptor Subtype mGluR6"
; SEQUENCE DESCRIPTION: SEQ ID NO: 1:
US-09-277-858-1
                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
CORRESPONDENCE ADDRESS:
STREET: 444 South Flower Street, Suite 2000
CITY: Los Angeles
STATE: CA
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Version #1.25
                                                                                                 CTCAAAGCCGTGGTCACCGCCGCCACCATGTCCAA 1628
                                                                                                                               crcaaggccaccrccacgcrgccagcccacccaa 2690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 880.6; DB 3;
Pred. No. 1.1e-192;
0; Mismatches 430;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PETENTIN PGT-B:
APPLICATION DATA:
APPLICATION NUMBER: US/09/277,858
FILING DATE: 26-Mar-1999
CLASSIFICATION: UNKNOWN>
PRIOR APPLICATION NUMBER: 08/407,875
APPLICATION NUMBER: 08/407,875
FILING DATE: 4UMKNOWN>
ATTORNEY/AGENT INFORMATION:
MAME: Reiter, Stephen E.
REGISTRATION NUMBER: 31,192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: P41 9921
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-546-4737
                                                                                                                                                                                                          Sequence 1, Application US/09277858
Patent No. 6362316
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: 619-546-9392
INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          50.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 2961 base pa
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 90071
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: nucleic acid
STRANDEDNESS: both
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 50.2
Best Local Similarity 72.5
Matches 1156; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY:
                                                                                                                                                                               RESULT 11
US-09-277-858-1
                                   1534
                                                                  2596
                                                                                                 1594
                                                                                                                               2656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        103
                                                          원
                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                         ठे
                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1533
                    1515
                                                                                                                                                                                                             1695
                                                                                                                                                                                                                                                                           1755
                                                                                                                                                                                                                                                                                                                                                                                                          1875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2355
                                                                                1516 accaariescaereccaecaerescescraccaescaeresceaeresceaeresceaerescente 1575
                                                                                                                                              1576 Agachggangingakggcccigcagingincingggacccccacgaggicccrcgicrcig 1635
                                                                                                                                                                                                                                                                                                                               GCCTCGGGCCGAGAGCTCAGCTACCTCCTCACCGGCATCTTCCTCATCTACGCCATC 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGGACCCCTCCCACTCGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCGCTTT 1233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2535
                                                                                                                                                                                                                                                                                                             753
                                                                                                                                                                                                                                                                                                                                                                          813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       993
                                                                                                                 573
                                                                                                                                                                                                                                             693
                                                                                                                                                                                                                                                                                                                                                                                                                                          873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        933
1696 TGGCACTGCGGAGGCCTGTGACGGGTACCGCTTCCAGGTGGACGAGTTCACATGCGAGGCC
                                                                                                                                                                                                                                                                                                                                                                                               GTGGCCACTACCACGTGGCCACCTTCGTGCGGTACAACAACACCCCATCGTCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCCTGGGCACGACCCTCAGCTACTCTGCCCTGCTCACCAAGACCAACCGTATCTACCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGGTCATCACCTTCAGCCTCACCTCCCTGCAGGTGGTGGGGATGATAGCATGGCTGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCATGCTGCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCCTCCTGCTCATGGTCACGTGCACAGTGTACGCCATCAAGGCCCCGTGCCCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCTTCAACGAGGCCAAGCCCATCGGCTTCACCATGTACACCACCTGCATCATCTGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCATTCGTGCCCATCTTCTTTGGCACTGCCCAGTCAGCTGAAAAAGATCTACATCCAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCACACTGACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATG
                                                   CGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTG
                                                                                                                 CACCTCAGAATAGAGCGGATGCAGTGGCCAGGGAGTGGCCAGCTGCCGCGCGCTCCATC
                                                                                                                                                                               TGGCACTGCGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACC
                                                                                                                                                                                                                                                                                                           TGCCCCTACGACATGCGCCCACAGAGCACGCGACGAGCTGCCAGCCCATCGTC
                                                                                                                                                                                                                                                                                                                                                                            AAGTIGGAGTGGGACTCGCCGTGGCCGTGCCCCCTCTTCCTGGCCGTGGTGGCCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCGCCACGCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCCATCGTCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCTCGGGCCGGGAACTGAGCTACGTGCTGCTGCCGGCATCTTTCTGTGCTACGCCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCTICCICATGATCGCAGAGCCGGACCTGGGGGACCTGTTCGCTCCGCCGCATCTTCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGCTCGGCATGAGCATCAGCTACGCGGCCCTGCTGACCAAGACCAACCGCATTTACCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATCTTTGAGCAGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2116 ATCTTTGAGCAGGCGAAGCGCTCGGTCACACCCCCTCCTTCATCAGCCCCACCTCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGGCCATCACCTTCATCCTCATCTCCCTGCAGCTGCTCGGCATCTGCGTGCTTCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCCGGCCCCACACACACACATTCACTATGAGGAACAGCGGACGGTGGACCCCCGAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCAGGGGCGTGCTCAAGTGCGACATCTCGGACCTGTCCCTCATCTGCCTGGGCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCAGAGGGGGGCTCAAGTGCGACATGTCGATCTGTCTCTCATCGGCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCTTCAACGAGGCCAAGCCCATCGGCTTCACCATGTACACCACCTGCATTGTCTGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCTTCATCCCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACA
                                                  CGCAATGGCTCGGC
                                                                                                                 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1996
                    1456
                                                                                                                                                                                                               1636
                                                                                                                                                                                                                                                                                                                                                                                                          1816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1474
                                                   463
                                                                                                                                                                                 574
                                                                                                                                                                                                                                             634
                                                                                                                                                                                                                                                                                                             694
                                                                                                                                                                                                                                                                                                                                                                            754
                                                                                                                                                                                                                                                                                                                                                                                                                                          814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     994
                    요
                                                                              g
                                                                                                                                       g
                                                                                                                                                                            ò
                                                                                                                                                                                                          ద
                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                  <u>ያ</u>
                                                                                                                                                                                                                                                                                                                                                                                                    요
                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          유
                                                  ઠે
                                                                                                              8
```

ä

```
GCCTTCATCCCCATCTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACA 1473
                                                                                                                                                                                                                                                                                                                                                                                       2536 ACCACGCTAACCGTGTCCTTGAGCCTGAGTGCCTCGGTGTCCCTCGGCATGCTCTACGTA 2595
                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCAAAACCTACGTCATCCTCTTCCATCCAGAGCAGAATGTGCAGAAGCGGAAAGCGGAGC 2655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1084 GCCGAGTTCTGGGAAGAGAATTTTAACTGCAAACTGACCAGCTCAGGTACCCAGTCAGAT 1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCACACTGACGGTCTCCGTGAGTCTGAGCGCTTTCAGTGTCCCTGGGGATGCTCTACATG 1533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 12
US-09-126-280-1
; Sequence 1, Application US/09126280
; Patent No. 6103524
; GENERAL INFORMATION:
; APPLICAMT: Wu, Su
; APPLICAMT: Belagaje, Rama M
; TITLE OF INVENTION: Acid
; FILE REFREENCE: Sequence List
; Patent No. 6103524
; CURRENT APPLICATION NUMBER: US/09/126,280
; CURRENT FILING DATE: 1998-07-30
; NUMBER OF SEQ ID NOS: 24
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        163 AGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCAG 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCCATGGGCCACGCGTGCACGCC 282
                                                                                                                                                                                      GCCAGAGGGGTGCTCAAGTGCGACATGTCGGATCTGTCTCTCATCGGCTGCCTGGGCTAC
                                                                                                                           2356 AGCCTCCTGCTCATGGTCACGTGCACAGTGTACGCCATCAAGGCCCGTGGCGTGCCCGAG
                                                                                                        AGCATGCTGCTGATGGTCACGTGTACTGTGTACGCCCATCAAGACCCGAGGCGTGCCCGAG
                                                                                                                                                                                                                                                                                              103 GCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGA
                          GGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAACAACATCTGGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 2670;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTCAAAGCCGTGGTCACCGCCGCCACCATGTCCAA 1628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2656 CTCAAGGCCACCTCCACGGTGGCAGCCCCACCCAA 2690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
49.6%; Score 871; DB 3; L
Best Local Similarity 72.1%; Pred. No. 1.7e-190;
Matches 1150; Conservative 0; Mismatches 436;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; NAME/KEY: CDS
; LOCATION: (13)..(2643)
US-09-126-280-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 2670
                                                               2296
                                                                                                        1294
                                                                                                                                                                                                                                                                         1414
                                                                                                                                                                                                                                                                                                                  2476
                                                                                                                                                                                                                                                                                                                                                           1474
                                                                                                                                                                                                                                                                                                                                                                                                                                              1534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE
                       8 8
                                                                                         ઠે
                                                                                                                                8 8
                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                         8 8
                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                     1395
                                                                                                                                                                                                                                                                                                                  1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2175
1156 GCCGAGTTCTGGGAAGAGAATTTTAACTGCAAACTGACCAGCTCAGGTACCCAGTCAGAT 1215
                                                                                                                                                                                                                                                                                                                                                                                                    1456 GTGATGTTCAACGAGAACGGCGATGCGCCCGGGCGGTACGACATCTTCCAGTACCAGGCG 1515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1576 AGACTGGATGTGGAGGCCCTGCAGTGGTCTGGCGACCCCCCACGAGGTGCCCTCGTCTCTG 1635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1876 Gresceaceres residentes de consecuentes de la consecuencia de consecuenci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1936 GCCTCGGGCCGAGAGCTCAGCTACGTCCTCACCGGCATCTTCCTCATCTACGCCATC 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1996 Accrircricarderederedecreseseceses de rerereseces de conservantes de 2055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1114 CTGGCCATCACCTTCATCCTCATCTCCCTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTG 1173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGGACCCCTCCCACTCGGTGGACTTCCAGGACCAACGGACACTTGACCCCCGCTTT 1233
                                                                                                                                                                                                            342
                                                                                                                                                                                                                                                                                              402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   693
                                                                                                                                                                                                                                                                                                                                                                               462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     694 TGCCCCTACGACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATCCCCATCGTC 753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCTCGGGCCGGGAACTGAGCTACGTGCTGCCGGCATCTTTCTGTGCTACGCCACT 933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             514 CACCTCAGAATAGAGCGGATGCAGTGGCCAGGAGTGGCCAGCAGCTGCCGCGCTCCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  283 ATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGAT
                                                                                                                                                                                                                                                                                                                                                                             GTAACCTTCAATGAGAAGGGAGAGACGGGGGGGCGCTACGACATCTACCAGTACCAACTG
                                         163 AGCCACATCAAGAAGTGCACCCAACCGAGGCGCATCGGGCCAGGACTCGGCCTATGAGCAG
                                                                            1216 GATTCCACCGCAAATGCACAGGCGAGGAACGCATCGGCCGGGACTCCACCTACGAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                               463 CGCAATGGCTCGGC-----CGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                634 TGGCACTGCGACCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACTGTAAGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1696 TGGCACTGCGAGGCCTGTGACGGGTACCGCTTCCAGGTGGACGAGTTCACATGCGAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCGCCACGCTGTTCGTCGTCACGTTTGTGCGCTACAACGATACCCCCATCGTCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2116 ATCTTTGAGCAGGCAAGCGCTCGGTCACACCCCCTCCTTCATCAGCCCCACCTCACAG
                                                                                                                                                                                                                                                 1336 Aridcaccacciccriciccicridecacacacacicricicicceccaridaaacccari
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGAACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGCTCGGCATGAGCATCAGCTACGCGGCCCTGCTGACCAAGACCAACCGCATTTACCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATCTTTGAGCAGGCCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTTCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  574
                                                                                                                                                                                                                                                                                            343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2236
                                                                                                                                                                                                                                                                                                                                                                             403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           994
                                                                     셤
                                       ઠે
                                                                                                                                                     요
                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8 6 8 6
                                                                                                                     ઠે
                                                                                                                                                                                          È
                                                                                                                                                                                                                                                                                        8 6 8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                    6 6 6 6 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6 6 6 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8 & 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ጵ 8 ጵ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8 8 8 8
```

셤

8 8 8

8 8 8

8 8

8 6

B & B &

```
1093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCCAAAGTCTACATCCTCCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGT 1593
                                                                                                                                                                                                                                                                                                                          124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            64
                                                                                                                                                                                          1474 ACCACACTGACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GUCUACGAGGAACGCAUCGGCCGGGACUCCACCAACGAGGAGGGGGAAGGUGCAGUUU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCACGCTAACCGTGTCCTTGAGCCTGAGTGCCTCGGTGTCCTCGCCATGTTTACGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    125 TCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGCAC--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -- CAACCGAGAGGCGTTCGGGCAGGACTCGGCCTATGAGCAGGAGGAGGTGCAGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAACCTTCAATGAGAAC
ACCTTCAACGAGGCCAAGCCCATCGGCTTCACCATGTACACCACCTGCATTGTCTGGCTG
                                                                                             GCCTTCATCCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACA
                                                                                                                        GGGGTATCATCATCTTTGCCAACGAGGATGACATC--AGGGTTCGACCGATACTTCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGCACCCCAGCTGCTTAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Glutamate Receptor Protein and Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 2635;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                         CTCAAAGCCGTGGTCACCGCCGCCACCATGTCCAA 1628
                                                                                                                                                                                                                                                                                                                                                                                                                                    crcaagecaccrcaageageagecaccaagea 2618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 49.0%; Score 860.2; DB 3; Best Local Similarity 57.7%; Pred. No. 5.2e-188; Matches 945; Conservative 229; Mismatches 448;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 3, Application US/09126280
; Sequence 3, Application US/09126280
; Patent No. 6103524
; GENERAL INPORMATION:
   APPLICANT: Wu, Su
; APPLICANT: Belagaje, Rama M
; TITLE OF INVENTION: Metabotropic Glutamate R
; TITLE OF INVENTION: Acid
; FILE REFERENCE: Sequence List;
; Patent No. 6103524
; CURRENT APPLICATION NUMBER: US/09/126,280
; CURRENT FILING DATE: 1998-07-30
; NUMBER OF SEQ ID NOS: 24
; SOFTWARE: PatentIN Ver. 2.0
; SEQ ID NO 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: RNA
ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 2635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 13
US-09-126-280-3
                                                  2344
                                                                                                  1414
                                                                                                                                                                                                                                               2464
                                                                                                                                                                                                                                                                                            1534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1154
  1354
                                                                                                                                               2404
                                                                                                                                                                                                                                                                                                                                         2524
                                                                                                                                                                                                                                                                                                                                                                                         1594
                                                                                                                                                                                                                                                                                                                                                                                                                                           2584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                   g
                                                                                               6 6 6
                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                          පු
                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             원장
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCATGCTGCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAG 1353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1444 accaaridecagreceagregedegracidedageagregecearidegedagagedere 1503
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1504 agacitogangingakggcccrigcagingarcrigogaccccccacgaggigcccrcgrcrcr 1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             recidenticiones de la constanta de la constant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           873
                                                                                                                                                    GTGATGTTCAACGAGAACGAGGGATGCCCCCGGGCGGTACGACATCTTCCAGTACCAGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     deccrededacercardacracracións
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGGTCATCACCTTCAGCCTCACCTCCCTGCAGGTGGTGGTGGGGGTAATAACATGGCTGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2164 GCCCGGCCCCACACACAGGTGATTAACTATGAGGAACAGCGGACGGTGGACCCCGAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGAT
                                                              ATGCACCAGGCGCTCTGCCCTGGGCACACAGGCCTGTGCCCGGCGATGGAACCCACCGAT
                                                                                                                        GGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCT
                                                                                                                                                                                                                        GTAACCTTCAATGAGAACGGAGACGCACCGGGGCGCTACGACATCTACCAGTACCAACTG
                                                                                                                                                                                                                                                                                                                     CGCAATGGCTCGGC-----CGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                     TGCAGTCTGCCCTGCCAGCCCGGGGAGCGAAAGAAGACTGTGAAGGGCATGGCTTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGCACTGCGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTAGACCTGTAAGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCCCCTACGACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATCCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCGCCACGCTGTTCGTGGTCACGTTTGTGCGCTACAACGATACCCCCATCGTCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCTCGGGCCGGGAACTGAGCTACGTGCTGCTGGCGGCATCTTTCTGTGCTACGCCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCTTCCTCATGATCGCAGAGCCGGACCTGGACCTGTTCGCTCCGCCGCATCTTCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGCTCGGCATGAGCATCAGCTACGCGCCCTGCTGACCAAGACCAACCGCATTTACCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATCTTTGAGCAGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Arcrirgagcaagggaagggcrocricacacccccricarcagccccaccrcada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGGCCATCACCTTCATCCTCATCTCCCTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGGACCCCTCCCACTCGTGGACTTCCAGGACCAACGGACACTTGACCCCCCGCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1264
                                                                                                                                                                           1324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1294
                                                                                                                           343
                                                                                                                                                                                                                          403
                                                                                                                                                                                                                                                                        1384
                                                                                                                                                                                                                                                                                                                          463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        994
                              283
```

6 6 6 6 6 6

8 & 8

8

8 & B

ठ व ठ

```
1075 GGATTTGATCGATACTTTAGAAGCCGAACTCTTGCCAATAATCGAAGAAATGTGTGGTTT 1134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                103 GCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGA 162
           2474 UNGAGCCUGAGUGCCCUGGGCAUGUUUNACGUACCCAAAACCUACGUCAUC
1492 GTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCCAAAGTCTACATCATC
                                                      CTCTTCCACCCGGAGCAGGACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCCGTGGTCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAGGCGCAACATCTGGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3;
                                                                                                                                                                                                    Sequence 1. Application US/08855146
Patent No. 6221609
GENERAL INFORMATION:
APPLICANT: W. Su
TITLE OF INVENTION: EXCITATORY AMINO ACID RECEPTOR PROTEIN
TITLE OF INVENTION: AND RELATED NUCLEIC ACID COMPOUNDS
NUMBER SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESSEE: Eli Lilly and Company
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 3321;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                COMP
STREET: Lilly and Company
STREET: Lilly Corporate Center/Patent Department
CITY: Indianapolis
STATE: IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/855,146 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                47.8%; Score 839; DB 3; L
68.6%; Pred. No. 4.1e-183;
ive 0; Mismatches 535;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/021,243
FILING DATE: 07-ULL-1996
ATTORNEY/AGENT INFORMATION:
NAME: Webster, Thomas D.
REGISTATION NUMBER: 39,872
REFERENCE/DOCKET NUMBER: X-10836
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                  CARPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                      2594 dugecagececacecaa 2610
                                                                                                            GCCGCCACCATGTCCAA 1628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (317)276-2764
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 3321 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 68.6
Matches 1173; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDS
58..2781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                            46285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; NAME/KEY:
; LOCATION:
US-08-855-146-1
                                                                                                                                                                                 RESULT 14
US-08-855-146-1
                                                      1552
                                                                                                            1612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           43
                   g
                                                    δ
                                                                         셤
                                                                                                          ò
                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                 1754 CCCUGGGCACCCCCCCCCCCCCCCGGGCGGGCCACGGGCCACACGCGGG 1813
                                                                                                                                                                                                                                                                                                                                                                                                                         1874 AACUACGUCCUCCUCACCGGCAUCUCCUCAUCUACGCCAUCACCCUCCCCAUGGUGGCU 1933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       952 GAGCCGGACCTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATC 1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1012 AGCTACGCGCCCTGCTGACCAAGACCAACGCATTTACCGCATCTTTGAGCAGGGAAA 1071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1072 CGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCCAGCTGGCCATCACCTTCATC 1131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACGIGIACTGIGIACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAG 1371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2294 ACGUGCACAGUGUACGCCAUCAAGGCCCGGGGCGUGCCCGAGACCUUCAACGAGGCCAAG 2353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCATCTCCCTGCAGCTGCTCGGCATCTGCGTGGTTCGTGGTGGACCCCTCCCACTCG 1191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Greerega CTTCCAGGACCACTGACCCCCCCCCTTTGCCAGGGCGTGCTCAAG 1251
                                                                                                                                                                                                                                       711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTGACGGTCTCC 1491
                                                                   531
                                                                                                                                                                                                                                                                                                                                                     831
                                                                                                                                                                                                                                                                                             CCCACAGAGAGCGCACGAGCTGCCAGCCCATCGTCAAGTTGGAGTGGGACTCG 771
                                                                                                                                                                                                                                                                                                                                                                                                            GTGGTCACGTTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGCCGGGAACTG 891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 892 AGCTACGTGCTGCTGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCA 951
                                                                 ----CGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAGAATAGAGCGG
                                                                                                                        532 ATGCAGTGGCCAGGGAGTGGCCAGCAGCTGCGGGGTCCATCTGCAGTCTGCCCTGCCAG
                                                                                                                                                                                                                                     652 ACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCTACGACATGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCGTGGGCCGTGCTGCCCCTCTTCCTGGCCGTGGTGGGCATCGCCGCCACGCTGTTCGTG
                                                                477
                                                                                                                                                                                                                                                                                             712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1372
           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1432
                                                                                                                                                                                                                                                                                                                                                                                                           832
                                                              8
                                                                                    В
                                                                                                                      ઠે
                                                                                                                                           윱
                                                                                                                                                                            ò
                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                  È
                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                 윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
```

셤

ò 셤 8 g ઠે g

õ

8 8 ð 셤 ò ద ò g

```
TACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCC 1602
                                                                                                                                                                                                                                                                                                                                                  GTGGTCACCGCCGCCATGTCCCAACAAGTTCACACAAAGGGCAACTTCAGGCCCAAT 1662
                                                                                                                                                                                                                                                                                                                                                                                                             GGGGAAGCCAAATCAGAGCTGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACAG 1722
                                                                                                                                                                                                                                                                                                                                                                                                                                         GGCGAGGTGAAAAGTGAACTCTGTGAGAGTCTTGAAACCAACACTTCCTCTACCAAGACA 2751
CCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACAGTG
                                                                                                                                                                                    ACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCCAAAGTC
                                                                                                                                                                                                                                               erecreacaccaccarccaaccaaaccaaacrearccaaaaaccaaarcaacaacaaar
                                                                                                         EXCITATORY AMINO ACID RECEPTOR PROTEIN AND RELATED NUCLEIC ACID COMPOUNDS 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE: Eli Lilly and Company
STRET: Lilly Corporate Center/Patent Department
CITY: Indianapolis
STATE: IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 46285
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCTACGTCACCTACACCAACCATGCCATCT 1753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2752 ACATATACAGTTACAGCAATCATTCAATCT 2782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
NAME: Webster, Thomas D.
REGISTRATION NUMBER: 3, 972
REFERENCE/DOCKET NUMBER: X-10836
TELEPHONE: (317) 276-63334
TELEPAX: (317) 276-2764
INFORMATION FOR SEQ ID NO: 3:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/08/855,146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US 60/021,243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 3, Application US/08855146;
Patent No. 6221609
GENERAL INFORMATION:
APPLICANT: Belagaje, Rama M. APPLICANT: Wu, Su.
TITLE OF INVENTION: EXCITATORY AMI
TITLE OF INVENTION: AND RELATED NU
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESSEE: Elilily and Company
STREET: Lilly Corporate Center/P
CITY: Indianapolis
STATE: IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/0
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 15
US-08-855-146-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                       2572
                    2272
                                                                                                                                                                                                                                                             2512
                                                                                                                                                                                                                                                                                           1543
                                                                                                                                                                                                                                                                                                                                                                                 2632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1723
                                                 1303
                                                                                                             1363
                                                                                                                                         2392
                                                                                                                                                                      1423
                                                                                                                                                                                                    2452
                                                                                                                                                                                                                                1483
                                                                                                                                                                                                                                                                                                                                                     1603
                                                                                                                                                                                                                                                                                                                                                                                                                1663
                                                                                                                                                                                                                                                                                                                                                                                                                                            2692
                                                                                                                               a
                                                                                                                                                                                          요
                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                               d
                                                                                                                                                                                                                                                                                                                                                                           a
                                      8
                                                                         a
                                                                                                ઠે
                                                                                                                                                             8
                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1182
                                                                                                                                                                                                        1611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Arecacaaagarcrececresaracarresecrrrerecaesaargaeraecarrear 1371
                                                                                                                                                                                                                                                                                                                            ccenenaaeccaeeeaeaeaeaaaaaaaaaeeigaaaaeeercccrrectecceeeero
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 942
                                                                                                                                                                                                                                                                                                                                                                                                                                642
                                  AGTCATATAAAGAAATGCACAGGCTGGAGCGAATTGCTCGGGATTCATCTTATGAACAG 1251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         702
                                                                                                                                                                                                                                               GTAACCTTCAATGAGAACGGAGACGCACCGGGGCGCTACGACATCTACCAGTACCAACTG 462
                                                                                                                                                                                                                                                                                                                                                                                          GTGGAAGACATGCAGTGGGCTCATAGAGAACATACTCACCCGGCGTCTGTGCAGCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCAG
                                                                  GAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGCC
                                                                                                                            ATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGAT
                                                                                                                                                                                      GGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCT
                                                                                                                                                                                                                                                                                                         CGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAGA
                                                                                                                                                                                                                                                                                                                                                                    ATAGAGCGGATGCCCAGGGAGTGGCCAGCAGCTGCCGCGCCTCCATCTGCAGTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                CCCTGCCAGCCCGGGGAGCGAAAGAAGACTGTGAAGGCCATGGCTGCTGCTGGCACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGCCCTGCACCAGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACATGCGGCCCACAGAGAACCGCACGAGGCTGCCAGCCCATCCCCATCGTCAAGTTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGGACTCGCCGTGGCCGTGCTGCTCCTCGCCCGTGGTGGGCATCGCCCCCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCCATCGTCAAGGCCTCGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGGAACTGAGCTACGTGCTGCTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATGAGCATCAGCTACGCGGCCCTGACCAAGACCAACCGCATTTACCGCATCTTTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGGGCAAACGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCTTCATCCTCATCTCCTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2212 ceccaearcarcarreacraregadadedecededeciradarecagadadededede
                                     1192
                                                                                                                                                          1312
                                                                                                                                                                                                                   1372
                                                                                                                                                                                                                                                                                                            463
                                                                                                                                                                                                                                                                                                                                        1492
                                                                                                                                                                                                                                                                                                                                                                      523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1243
                                                                                               1252
                                                                                                                                                                                                                                                 403
                                                                                                                                                                                                                                                                               1432
                                                                                                                                                                                                                                                                                                                                                                                                  1552
                                                                                                                                                                                                                                                                                                                                                                                                                                 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1183
                                                                  223
                                                                                                                            283
                                                                                                                                                                                       343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            763
```

g

ઠે

요

ò

셤

ઠે

상 원 ઠે g ઠે 셤 ઠે g ò g ò 엄 ઠે

```
completed: June 21, 2005, 08:56:07
he : 319 secs
         1972
                                                                                                                                                                                                                                                                                                                                                                                                                                                        time
                                                                                                                                                                                                                                                                                                                                                                                                                                               Search c
Job time
         8 S
                                   ያ ያ
                                                                  g
                                                                                    ò
                                                                                                 g
                                                                                                               ò
                                                                                                                                 요
                                                                                                                                              ઠે
                                                                                                                                                             셤
                                                                                                                                                                                ò
                                                                                                                                                                                             g
                                                                                                                                                                                                           ò
                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                          ద
                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                        1371
                                                                                                                                                                                                                                                                                              1911
                                                                                                      1311
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATGATCGCAGAGCCGGACCTGGGGGACCTGCTCCGCCGCATCTTCCTAGGGCTCGGC 1002
                                                                                                                                     1431
                                                                                                                                                                                                                                                                                                                                    1551
                                                                                                                                                                                                                                                                                                                                                                   102
                                                                                                                                                                                         282
                                                                                                                                                                                                                                                        402
                                                                                                                                                                                                                                                                                     462
                                                                                                                                                                                                                                                                                                                     522
                                                                                                                                                                                                                                                                                                                                                                                                                                               762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              822
                                                                                                                                                          222
                                                                                                                                                                                                                                                                                                                                                    582
                                                                                                                                                                                                                                                                                                                                                                                  642
                                                                                                                                                                                                                                                                                                                                                                                                                  702
                                                                                                                                                                                                                         ATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGAT 342
                                                                                                                                                                                                  GCCGAGTTCTGGGAGACACTTCCATTGCAAGTTGAGCCGCCAGGCGCTCAAGAAGGA
                                                                                                                                                                                         GAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGCC
                                                                                                                                                                                                                                  GGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCT
                                                                                                                                                                                                                                                                GTAACCTTCAATGAGAACGGAGACGCACCGGGGGGCGCTACGACATCTACCAGTACCAACTG
                                                                                                                                                                                                                                                                                                                    CGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACACTCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                               GACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGTTCGTGGTCACGTTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGAACTGAGCTACGTGCTGCTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTC
                                                                                            GGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAGGCGCAACATCTGGTTT
                                                                                                                                                           AGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCAG
                                                                                                                                                                                                                                                                                                                                                    ATAGAGCGGATGCAGTGGCCAGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCTG
                                                                                                                                                                                                                                                                                                                                                                                  CCCTGCCAGCCCGGGGAGCGAAAGAAGACTGTGAAGGGCATGGCTTGCTGGCACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                  GAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCTAC
                                                                              Gaps
                                                                              ъ,
                                                               Length 3321
                                                              Query Match
47.8%; Score 839; DB 3; Length 3:
Best Local Similarity 52.5%; Pred. No. 4.1e-183;
Matches 898; Conservative 275; Mismatches 535; Indels
; SEQUENCE CHARACTERISTICS:
; LENGTH: 33.1 base pairs
; TYPE: nucleic acid
; TYPE: nucleic acid
; TYPE: nucleic acid
; TOPOLOGY: linear
; MOLECULE TYPE: mRNA
US-08-855-146-3
                                                                                                                                           1135
                                                                                                                                                                          1192
                                                                                                                                                                                                         1252
                                                                                                                                                                                                                                        1312
                                                                                                                                                                                                                                                                                                                                                                   1552
                                                                                                                                                                                                                                                                                                                                                                                                                                1672
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1852
                                                                                             43
                                                                                                                            103
                                                                                                                                                           163
                                                                                                                                                                                         223
                                                                                                                                                                                                                         283
                                                                                                                                                                                                                                                        343
                                                                                                                                                                                                                                                                      1372
                                                                                                                                                                                                                                                                                     403
                                                                                                                                                                                                                                                                                                                     463
                                                                                                                                                                                                                                                                                                                                                    523
                                                                                                                                                                                                                                                                                                                                                                                   583
                                                                                                                                                                                                                                                                                                                                                                                                                  643
                                                                                                                                                                                                                                                                                                                                                                                                                                                703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           943
                                                                                                                                                                                                                                                                                                  8 8 8
                                                                                                          쉽
                                                                                                                                      a
                                                                                                                                                                      g
                                                                                                                                                                                        ઠે
                                                                                                                                                                                                    q
                                                                                                                                                                                                                                   요
                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                 රි සි
                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                               음 중 음
                                                                                                                                                                                                                                                                                                                                                                                                             ሪ ස ሪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ठ हे ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ద
                                                                                                                           8
                                                                                                                                                      8
                                                                                                                                                                                                                  Š
```

```
1182
                                                                                                                                                                                                                                                                                                                                                                                                                  1422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1482
                                                                                                                                                                                                                                                                                                                                                                                                                                                2451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTC 1542
                                                                                                                                                                                                 2211
                                                                                                                                                                                                                                                                                                            CTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAAC 1362
                                                                                                                                                                                                                                                                                                                                                                       TACATCATCATCATCCACCCGGAGCAGACGTGCCCAAGCGCAAGCGCAGTCTCAAAGCC 1602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGGTCACCGCCGCCACCATGTCCAACAGTTCACACAGAAGGGCAACTTCAGGCCAAT 1662
                                                                                                                                                                                                                                                   GGGGAAGCCAAATCAGAGCTGTGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACAG 1722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2392 GAAGCCAAACCUAUUGGAUUUACCAUGUAUACCACCUGCAUCAUUUGGUUAGCUUUCAUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTG
                                                                                                                                                                                                                                                                                                                                                                                                                   2452 CCCAUCUUUUUGGUACAGCCCAGUCAGCAGAAAAAGAUGUACAUCCAGACAACAACAACUU
ATGAGCATCAGCTACGCGGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGAG
                                                                 CAGGGAAAAAAAUCUGUCACAGGCCCCAAGUUCAUUAGUCCAGCAUCACCAGGUGAUC
                                                                                                                                                                                     CAGGGCAAACGGTCAGTGCCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATC
                                                                                                                                                                   ACCTTCATCCTCATCTCCCTGCAGCTGCTCGGCATCTGCGTGGTTCGTGGTGGACCCC
                                                                                                                                                                                                                                 TCCCACTCGGTGGACTTCCAGGACCAACGGACACTTGACCCCCCCTTTGCCCAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2632 guegugacaecueccaccauecaaaecaaacueauccaaaaaecaaaaugacaaau
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCTACGTCACCTACACCATGCCATCT 1753
                                                                            2032
                                                                                                          1063
                                                                                                                                                                                                                                                                                            1243
                                                                                                                                                                                                                                                                                                                                                        1303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1663
                                               1003
                                                                                                                                       2092
                                                                                                                                                                      1123
                                                                                                                                                                                                                                 1183
                                                                                                                                                                                                                                                                                                                                                                                                                   1363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2752
```

This Page Blank (uspto)

```
880.6
21
                                                                                                                                  June 21, 2005, 01:52:20 ; Search time 983 Seconds (without alignments) 10568.816 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                1 atgccaggggtatcatcatc.....acaccaaccatgccatctag 1755
                                                                                                                                                                                                                                                                                                                                                                                                           8780412
                GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                 4390206 segs, 2959870667 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                    IDENTITY NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  geneseqn2003cs:*
geneseqn2003ds:*
geneseqn2004as:*
geneseqn2004bs:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N_Geneseq_16Dec04:*

1: geneseqn1980s:*

2: geneseqn1990s:*

3: geneseqn2000s:*

4: geneseqn2001as:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  geneseqn2002as:*geneseqn2002bs:*geneseqn2003as:*geneseqn2003as:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               geneseqn2001bs:*
                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                    US-10-828-332-6
                                                                                                                                                                                                                    Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Database :
                                                                                                                                                                                                                                                                                                                                                                   Searched:
                                                                                                                                        Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Result
No.
```

Abcro676 Rat gluta Abx16077 Rat cDNA Ado2996 Mouse nov Ado2976 Human met Abx16087 Human met Abx16087 Human met Abx16087 Human met Abx16087 Human met Ade07288 Novel cod Aca56476 Human sig Adi56272 Human pol Adg89131 Human mcl Adr6667 Fxll leng Adr10413 Full leng Acn43319 Human dia Acn43319 Human dia Acn43319 Human dia Acn43319 Human dia Acn43318 Human dia Acn43318 Human dia Acn43319 Human dia Acn43318 Human dia Description ABZ42692 ADE07285 ACA56476 ADO29776 AAD38025 AAD38024 ABX16087 ADQ89113 AAT03888 AAQ89342 ABX16077 ADO29096 ADI56272 В Query Match Length 2694 2739 3431 3431 3884 3884 3884 3884 3884 144700.8 144700.8 144700.8 144700.8 1446700.8 144690.8 13450.8 13450.8

ADR06667 ADR10413 ACN43319

O

ACN43318 ADO29778 AAT38322

AAS98044 Aas98044 Human DNA ABZ42694 Human met ADZ42694 Human met ADZ42694 Human met ADZ42694 Human NF-AAAS9555 ADA encod AAAS9555 ADA encod AAAS9555 ADA encod ADG30247 Mouse GPC ADG30249 ADG30249 Human mG1 ACF05180 Human mG1 ACF05181 ACF05181 ACF05181 ACF05181 ACF05182 AAV04205 AAV04206 AAV04206 AAV04206 Human met ADZ31728 AAV04207 AAV04206 AAV04207 AAV04206 AAV04207 AAV0480709	ALIGNMENTS 5 BP. coding sequence. antidiabetic; laxative; antidiarrheic; eptor; gaetrointestinal tract disorder; diabetes; constipation; diarrhoea; gene; ds. alifiers Glutamic acid receptor"	neyama H, Torii K; protein and encoded DNA, applicable in ists of glutamic acid or allosteric ameliorating symptoms and diseases e.g. Japanese.
AAS9804 AAS9804 AAAS985 AAAS985 AAAS985 AAAS985 AAAS985 AAAS985 AAAV988 AAAV9972 AAAV9972 AAAV9972 AAAV9972 AAAV9972	ALIG A; 1755 BP. ntry) eptor coding s lcer; antidiab r; receptor; g ulcer; diabete ion/Qualifiers 755 uct= "Glutamic	5 55
12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	10 0 5 7 =	JP010984 O0325159 INC. awa T, 1 receptor r antagoo drugs ii 3; 39pp;
556 6122 6122 26122 26122 2727 2727 2727 2	DN DN rec cat cat rod rod	ka sur san
000000000000000000000000000000000000000	(first acid r. c., ant: recept besity besity 1 coc. 1 coc.	1002WO- 1001JP- Mae) Mae) Mae) 118/40 11818 (11818)
U U U 44444444444444444444444444444444	द नगठक ।	12; 11; IINO 11 A 430 8R56 8R56 8R56 16or
88888888888888888888888888888888888888	T 1 ACC70676 sta ACC70676; 20-NOV-2003 Rat glutamic Rat; anorect glutamic aci sltieirgla; Rattus norve Key CDS WO2003035873	200 200 100 11 11 11 11 11 11 11 11 11 11 11 11 11
		23-OCT- 23-OCT- (AJIN) San Gab WPI, 20 P-PSDB; Novel g BCreeni modulat obesity
12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	RESULT 1 KX KX KX KX KX KX KX KX KX K	B CHES PE SO C
	X B X B X B X B X B X B X B X B X B X B	*************

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
The present sequence is the coding sequence for rat glutamic acid receptor. The receptor has a transmembrane domain and an intracellular domain common to type 4 metabotropic glutamic acid receptor protein, and an extracellular domain shorter by 316 or 327 amino acid receptor than type 4 metabotropic glutamic acid receptor protein. The receptor and its coding sequence are useful in screening agonists or antagonists of glutamic acid or allosteric modulator for use as drugs in ameliorating symptoms and diseases due to abnormal metabolism in gastrointestinal tract including small and large incestines e.g. sitisirgia, obesity, ulcer, diabetes, constipation and diarrhoea
                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                          1 ATGCCAGGGGTATCATCATCTTTGCCAACGAGGATGACATCAGGGTTCGACGGATACTTC
                                                                                                                                                                                                                                                                                                                                                   TCCAGCCGCACGCTGGACAACAACAGCGCAACATCTGGTTTGCCGAGTTCTGGGGGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGGAAGCCACATCAAGAAGTGC
                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                        ;
0
                                                                                                                                                                                                                                                  DB 8; Length 1755;
                                                                                                                                                                                                               Sequence 1755 BP; 364 A; 581 C; 479 G; 331 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                Query Match 100.0%; Score 1755; Best Local Similarity 100.0%; Pred. No. 0; Matches 1755; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
 888888888888888888
                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Вb
```

240 360 840 240 480 540 540 900 780 840 180 300 300 360 420 420 480 600 999 9 720 720 780 ACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCAGGAGGGGAAAGGTGCAGTTC GTGATTGACGCTGTGTACGCCATGGCCCACGCGTGCACGCCATGCACCTGTGT CCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGCACCAGCTGCTTAAG CCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGATGGCACCCAGCTGATAAG TACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCCTGTAACCTTCAATGAGAAC TACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGG TACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAGAATAGAGCGGATGCAGTGG CCAGGGGAGTGGCCAGCAGCTGCCGCTCCATCTGCAGTCTGCCCTGCCAGCCCGGGGAG ccadegagregocadecaderecedecrecarcrecagrerecereceadecededad CGAAAGAAGACTGTGAAGGGCATGGCTTGCTGCTGCACTGCGAGCCCTGCACCGGGTAC CGAAAGAAGACTGGAAAGGGCATGCTGCTGCTGCTGCCGCGCGCCTGCTGCACCCCGGGTAC CAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAG CAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTACGACATGCGGCCCACAGAG AACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGGCC AACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGAGTGGGACTCGCCGTGGGCC GTGCTGCCCCTTCCTGGCCGTGGTGGGCATCGCCGCCACGCTGTTCGTGGTGGTCACG GIGCIGCCCTCTTCCTGGCCGTGGTGGCATCGCCGCCACGCTGTTCGTGGTGGTCACG 121 181 181 241 241 301 301 361 361 421 421 481 481 541 541 601 661 661 721 781 601 721 781

음 &

g ઠે 요 ઇ 셤 ò g ò g ઠે

ብ ራ

ઠ a ઠે

8 8 8 8

entry)

(first

03-APR-2003

1020 1080 1320 1320 1380 1440 1440 1500 1560 1620 1740 900 960 GTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCCAAGCCCATCGGC 1621 ATGTCCAACAAGTTCACACAGAGGGCAACTTCAGGCCCAATGGGGAAGCCAAATCAGAG TTTGTGCGCTACAACGATACCCCCATCGTCAGGCCTCGGGCCGGGAACTGAGCTACGTG CIGCTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGAC CTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCG CTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTGGACCCCTCCCACCCCACCTGGTGGTGGAC 1261 TCGGACCTGTCCCTCATCTGCCTGCTGGCTACAGCATGCTGCTGATGGTCACGTGTACT 1501 AGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGTCTACATCCTCTTCCAC CTGTGTGAGAACCTGGAGACCCCAGCGCTGGCTACAAACAGACCTACGTCACCTACACC CTGCTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCTCATGATCGCAGAGCCGGAC CTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGGCATGAGCATCAGCTACGCG GCCCTGCTGACCAAGACCAATTACCGCATCTTGAGCAGGCAAACGGTC 1081 AGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATCACCTTCATCTCCC TTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGGCGTGCTCAAGTGCGAATC GTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAACGAGGCCAAGCCCATCGGC TICACCATGIACACCACCIGCATIGICIGGCIGGCCITCAICCCCAICITITITIGGCACC TCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACTGACGGTCTCCGTGAGTCTG TCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACTGACGGTCTCCGTGAGTCTG TCGGACCTGTCCCTCATCTGCCTGCTGCGCTACAGCATGCTGATGGTCACGTGTACT BP AACCATGCCATCTAG 1755 CDNA; 1201 1381 1441 1621 841 901 901 961 196 1021 1021 1081 1141 1141 1201 1261 1321 1321 1381 1441 1501 1561 1561 1681 1741 ABX16077; ABX16077 RESULT 2 ABX16077 ID ABX1 XX AC ABX1 XX DT 03-A a 셤 g g ď 임 g a 셤 8 요 ઠે ò 셤 ે ઠે 8 8 ઠે 8 ò ઠે g 셤 a 8 ð ઠે ठे Š ઠે

461 649 709 581 829 701

641

```
CTCCCACTCGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCCGCTTTGCCAGGGG 1241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1302 GCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAA 1361
                                                                                                                                                                                                                                                          590 IGTAACCTICAAIGAGAACGGAGACGCACCAGGGCGCTACGACATCTACCAGACCTACCAACT
                                                                                                                                                                                                                                                                                                                                    GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCCTGCCAGCCCGGGGGAGCGAAAGACTGTGAAGGGCATGGCTTGCTGCTGGCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          950 GIGGGACTCGCCGTGGCGCCCTCCTCTTCCTGGCCGTGGTGGCATCGCCGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CATGCACCGTGACCTGTGTCCTGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                             530 TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                 710 AATAGAGCGGATGCAGTGGCCAGGGGGTGGCCAGCTGCCGCCCCCCTCCATCTGCTGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    642 CGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       890 GGACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1250 GCAGGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1370 CTCCCACTCGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGG
                                    410 GGAGGGGAAAGGTGCAGTTCGTCATTGACGCTGTATGCGCCATGGGCCACGCGCTGCACGC
                                                                                                                                                                                                                                   TGTAACCTTCAATGAGAACGGAGACGCACCGGGGCGCTACGACATCTACCAGTACCAACT
                                                                                                                                                                                                                                                                                                                GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAG
                                                                                                                                                                                                                                                                                                                                                                                           AATAGAGCGGATGCAGCCCAGGGAGTGGCCAGCAGCTGCCGCCCTCCATCTGCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCCTGCCAGCCCGGGGAGAAGAAGACTGTGAAGGGCCATGGCTTGCTGCTGCTGCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1010 GCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1070 CCGGGAGCTGAGCTACGTGCTGCTGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATGAGCATCAGCTACGCGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCAGGCCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CACCTTCATCCTCATCTCCCTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   882 CCGGGAACTGAGCTACGTGCTGCTGCGGGGCATCTTTCTGTGCTACGCCACTACCTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CATGATCGCAGAGCCGGACCTGGGGGACCTGGTTCGCTCCGCCGCCATCTTCCTAAGGGCTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1430 CETECTCAAGTGCGACATCTCGGACCTGTCCTCATCTGCCTGCTGGCTACAGCATGCT
                                                                                                                470
                                                                                                                                                       342
                                                                                                                                                                                                                                                                                                                                                  920
                                                                                                                                                                                                                                                                                                                                                                                         522
  222
                                                                              282
                                                                                                                                                                                                                                   402
                                                                                                                                                                                                                                                                                                                462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             942
                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                    g
                                                                                                            g
                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                  요
                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                              ð
                                                                                                                                                         ઠે
                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to a rat metabotropic glutamate taste receptor having a molecular weight of 68 kDa, mGluR4, appearing as ABG74133. Also included are an isolated mRNA molecule encoding mGluR4 appearing as 8 as a molecular weight of 68 kDa, mGluR4, appearing as ABX16087, a mammalian cell transfected with cDNA encoding mGluR4 (the cDNA expressed continued mammalian cell is capable of being translated into immunologically recognisable metabotropic glutamate taste receptors) and screening compounds (comprising: (a) transfecting mammalian cells with an isolated rat cDNA encoding metabotropic glutamate taste receptor; (b) culturing the transfected cells in an environment that promotes expression of mmunologically recognisable metabotropic glutamate taste receptor; (c) treating the transfected cells with a compound that induces CAMP production; (d) incubating the cells with a compound that induces cAMP production; (d) incubating the cells with a sample containing a potential umam iminicking compound capable of binding to the metabotropic glutamate taste receptors; (e) measuring the amount containing a potential umam iminicking compound binding to the metabotropic glutamate taste receptors; (e) measuring the same taste receptors). The mGluR4 functions as a umami taste receptor, and responds containing to sereeling samples for umami mimicking compounds.

The cell is useful for screening samples for umami mimicking compounds.

The mGluR4 is useful for screening samples for umami mimicking compounds.

The mGluR4 is useful for screening samples for umami mimicking compounds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 409
                                      Rat; ss; gene; metabotropic glutamate receptor; mGluR4; umami; taste receptor; umami mimicking compound; monosodium L-glutamate; cAMP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                umami
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          102 TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAACAACATCTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel metabotropic glutamate taste receptor which functions as a um
taste receptor, useful for screening for umami mimicking compounds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97.3%; Score 1707.6; DB 8; Length 2838; 99.8%; Pred. No. 0; i.ve 0; Mismatches 4; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 2838 BP; 533 A; 939 C; 770 G; 596 T; 0 U; 0 Other;
  cDNA encoding metabotropic glutamate receptor mGluR4.
                                                                                                                                   Location/Qualifiers
129. .1943
/*tag= a
/product= "mGluR4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6; Page 6-7; 23pp; English.
                                                                                                                                                                                                                                                                                                              30-MAR-2001; 2001US-00820809
                                                                                                                                                                                                                                                                                                                                                  31-MAR-2000; 2000US-0193454P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2003-182515/18.
                                                                                                                                                                                                                                                                                                                                                                                       (UYMI-) UNIV MIAMI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 1710; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P-PSDB; ABG74133
                                                                                                                                                                                                                                 US2002151052-A1
                                                                                                                                                                                                                                                                                                                                                                                                                             Chaudhari N,
                                                                                                                                                                                                                                                                        17-0CT-2002
                                                                                              Rattus sp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
```

1069

881

949 821 1129

941

1001

1061

```
1320 TGGCACCCAGCTGATTAAGTACATCAGAAACGTCAACTTCTCAGGCATCGCCGGGAACCC 1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGCACCCAGCTGATAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         102
  %XCCCCCCCCCCCCCCCCCCCCCCCCCCCCX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Transgenic mouse; neurological disorder; adrenal gland disorder;

Transgenic metabolic disorder; immune disorder; bone disorder;

Transgenic metabolic disorder; mutritive disorder;

Transgenic metabolic disorder; mutritive disorder;

Transgenic metabolic disorder; neurological sorder;

Transgenic metabolic disorder; mutritive disorder;

Transgenic metabolic mutritive metabolic;

Transgenic metaborrhoeic;

Transgenic metaborrhoeic;
                                                                                            1481
                                                                                                                                                                                                     1601
                                                                                                                                                                                                                                                                                                                                         1909
1661
                                                         CGTGGTCACCGCCGCCACCATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCAA 1849
                                                                                                                                                                                                                                                                                                                TGGGGAAGCCAAATCAGAGCTGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACA 1721
                                                                                                              CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACT
                                                                                                                                                                                                                      CTACATCCTCCTCCTCCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGC
                                                                                                                                                                                                                                                                                                                               CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACT
                                                                                                                                                   GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGT
                                                                                                                                                                             GACTGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGGATGCTCTACATGCCCAAAGT
                                                                                                                                                                                                       CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGC
                                                                                                                                                                                                                                                            CGTGGTCACCGCCGCCACCATGTCCAACAAGTTCACACAGAAGGGCCAACTTCAGGCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GA, Bergmann JE, Gragerov A, Hohmann J, Ļi F;
Mcilwain KL, Pavlova MN, Vassilatis D, Zeng H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mouse novel GPCR GRM4 polynucleotide, SEQ ID NO:195.
                                                                                                                                                                                                                                                                                                                                                                     GACCTACGTCACCTACACCAACCATGCCATCTAG 1755
                                                                                                                                                                                                                                                                                                                                                                                   GACCTACGTCACCTACACCAACCATGCCATCTAG 1943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADO29096 standard; cDNA; 2694 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        09-SEP-2003; 2003WO-US028226.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09-SEP-2002; 2002US-0409303P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (PRIM-) PRIMAL INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    murine; gene; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO20040400000-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13-MAY-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Madisen L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaitanaris
                                                                                                                          1610
                1490
                                          1362
                                                                                                                                                                             1670
                                                                                                                                                                                                                                 1730
                                                                                                                                                                                                                                                                                     1790
                                                                                                                                                                                                                                                                                                                 1662
                                                                                                                                                                                                                                                                                                                                           1850
                                                                                                                                                                                                                                                                                                                                                                     1722
                                                                                                                                                                                                       1542
                                                                                                                                                                                                                                                            1602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADO29096;
                                                                                                                                                    1482
                                                                                                                                                                                                                                                                                                                                                                                                                                                    AD029096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                 ð
                                                                                                                                                                            셤
                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                          ઠે
                                                                                               ઠ
```

```
The invention relates to human and mouse G protein-coupled receptors (GPCRs) and nucleic acids encoding them. The invention also relates to sequences at least 90% identical to the GPCR proteins and nucleic acids of the invention, methods of treating, preventing or diagnosing diseases associated with GPCRs of the invention; methods of screening for compounds useful in the treatment of GPCR-related diseases; a transgenic mutation in a GPCR transgene or in an endogenous GPCR gene; cells derived from the trasngenic mice; kits comprising several mice, each of which has a mutation in a different GPCR gene of the invention; and kits comprising probes which hybridise to GPCR polymucleotides of the invention. The invention intrher discloses variants of the GPCR polymptides and vectors comprising a GPCR nucleic acid The GPCR nucleic acids and proteins may be used in the diagnosis, treatment or prevention of a wide variety of discress of the advances, captured acids and proteins may be used in the diagnosis, treatment or prevention of a wide variety of discress of the advances of the GPCR nucleic acids and proteins may be used in the diagnosis, treatment or prevention of a wide variety of discress of the advances, food poisoning or irritable bowel syndrome); cardiovascular disorders (e.g., Alzheimer's disease, distrathos, parkingon's disease or schizophrenia); anamenia or leukaemia); immune disorders (e.g., angina, cardios arrhythmia or myccardial infarction); muscular disorders (e.g., autoimune disorders of the XDS); bone and joint disorders (e.g., angina, cardios arrhythmia or mand joint disorders (e.g., angina, cardios arrhythmia or attritis, gout or osteoporosis); metabolic or nutritive disorders or threas, prostate, testis, skin, stomach, pancreas, spleen, thymus and disorders of the kidney, liver, lung, breast, testis, skin, stomach, pancreas, spleen, them are obtained of the invention. Note: The full sequence data for this parent diad not form part of the prince dependence of the relation of the manner of the princ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1020 AGGGTTGACCGATACTTCTCCCAGCCGCACGCTTGACAACAACAACAGCGCAACATCTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1080 TGCTGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCCACGCGCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1260 chigchrengherigienerecegeceerhogherereceregangeheren
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          42 AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAGCGCGAACATCTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      162 AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            222 GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCCATGGGCCACGCGCTGCACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         282 CATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            36; Gaps
                                                                                                                     Novel mammalian G protein coupled receptors, useful for identifying compounds that modulates diagnosing and treating disease condition associated with GPCR dysfunction e.g. autoimmune diseases, angina pectoris, Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 2694;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 2694 BP; 544 A; 866 C; 757 G; 527 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 1473.8; DB 12; Lengt
Pred. No. 2.8e-308;
0; Mismatches 97; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                   Claim 13; SEQ ID NO 195; 542pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             84.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
WPI; 2004-390329/36.
P-PSDB; ADO29095.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 1578;
```

compounds useful in the treatment of GPCR proteins and nucleic acids of treating preventing or diagnoshing diseases associated with GPCRs of treating, preventing or diagnoshing diseases associated with GPCRs of the invention; methods of screening for compounds useful in the treatment of GPCR-related disease; a transgenic mouse comprising a moutation in a GPCR transgene or in an endogenous GPCR gene; cells derived from the transgenic mice; kits comprising several mice, each of which has a mutation in a different GPCR gene of the invention; and kits comprising probes which hybridise to GPCR gene of the invention; and kits comprising probes which hybridise to GPCR gene of the invention. The invention further discloses variants of the GPCR polypeptides and vectors comprising a GPCR nucleic acids and proteins may be used in the disgnosis, treatment or prevention of a wide variety of diseases including neurological disorders (e.g., Alzheimer's disease, depression, diabetic neuropsthy, Parkinson's disease or schizophrenia); disorders of the adrenal gland; disorders of the colon or intestine (e.g., Crohn's disease, diarrhoea, food poisoning or irritable bowel (e.g., Crohn's disease, diarrhoea, food poisoning or irritable bowel (e.g., candiovesullar disorders (e.g., autoimmune disorders or myocardial infarction); muscular disorders (e.g., autoimmune disorders (e.g., and disorders (e.g., and disorders (e.g., and disorders (e.g., and disorders (e.g., osteoarthritis, rheumatoid arthritis, gout or osteoporosis); metabolic or nutritive disorders or thyroid (e.g., cancers). The present sequence represents a GPCR-encoding nucleus and joint disorders (e.g., lung) bancreas, spleen, thyroid (e.g., cancers). The present sequence represents a GPCR-encoding not shown were obtained in electronic format directly from WIPO at the warm obtained between the disorders.

Sequence 2739 BP; 545 A; 888 C; 783 G; 523 T; 0 U; 0 Other;

1145 1565 1265 carecaccereaccrererecededeceseseserereceseses readences 1325 521 281 341 401 461 CAGCCACGTCAAGAAGTGCACCAACCGTGAGCGAATTGGGCAGGATTCAGCTTATGAGCA 42 AGGITCGACCGATACTICTCCAGCCGCACGCTGGACAACAACAACAACAACATCTGGTT 1026 AGGCTTCGACCGCTACTTCTCCAGCCGCACGCTGGACAACACCGGCGCAACATCTGGTT TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG AAGCCACATCAAGAAGTGCACCAACCGAGAGGGCATCGGGCAGGACTCGGCCTATGAGCA GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCCATGGGCCAACGCGCTGCACGC CATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC rescacceaectraagracareceaaecereaectrereaeceaeceaece TGTAACCTTCAATGAGAACGGAGACGCACCGGGGCGCTACGACATCTACCAGTACCAACT rergacerricaargaargeagargeecergeecerargacareracearraceaecr GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAG GCGCAACGATTCTGCCGAGTACAAGGTCATTGGCTCCTGGACTGACCACCTGCACCTTAG AATAGAGCGGATGCAGTGGCCAGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCT AATAGAGCGGATGCACTGGCGGGGAGCGGGCAGCTGCCCCGCTCCATCTGCAGCTG Gaps DB 12; Length 2739; ; 0 Pred. No. 1.3e-307; 0; Mismatches 152; Indels Score 1470.8; Best Local Similarity 91.1%; Matches 1562; Conservative (83.8%; 162 1446 102 1086 1146 1206 282 1266 1326 1386 522 222 342 402 462

g

ઠે

유 ò 셤 ਨੇ മ്പ ò 요

a

ò

셤

ð

g

ò

ò

1925 2045 2105 2225 1361 2345 1421 1481 2465 2525 1601 1865 1061 1181 1301 CATGATCGCTGAGCCCGACCTTGGCACCTGCTCGCTGCGCCGAATCTTCCTGGGACTAGG 1985 191 1662 TGGGGAAGCCAAATCAGAGCTGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACA 1721 821 881 941 GCCCTGCCAACCGGGTGAGCGGAAGAAGAAGACGGCATGCCTTGCTGCTGGCACTG GTTGTTCGTGGTGATCACCTTTGTGCGCTACAACGACACGCCCATCGTCAAGGCCTCGGG correaecracerecrecrecrescaescarcrrccrerecrareccaecarrecr CTCCCACTCGGTGGTGGACTTCCAGGACCAGCGGACACTCGACCCCCGCTTCGCCAGGGG CGTGGTCACCGCCGCCACCATGTCCAACAAGTTCACACAAGAAGGGCAACTTCAGGCCCAA cercerracedeceacearereceaeaaerreaceaeaaaeaecaaerreceeceaa CGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCTA 702 CGACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATCCTCAAGTTGGA GCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCCATCGTCAAGGCCTCGGG ccaganctangeraceraceraceagacaterretrategacacracerrecr CATGATCGCAGAGCCGGACCTGGGGACCTGTTCGCTCCGCCGCCATCTTCCTAGGGCTCGG CATGAGCATCAGCTACGCGGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGA GCAGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCAT GCAGGGCAAGCGCTCGGTCAGTGCCCCACGCTTCATCAGCCCCGCCTCACAGCCGGCAT CACCTTCATCCTCATCTCCCTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGACCC CTCCCACTCGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGG TGTGCTCAAGTGTGACATCTCGGACCTGTCGCTCATCTGCCTGGGCTACAGCATGCT GCTGATGGTCACGTGTACTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAA CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACT 2406 CCCCATCTTTGGCACCTCGCAGTCGCCGACAAGCTGTACATCCAGACGACGCCT GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGT CTACATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGC CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGCCTCAAAGC 1746 1926 1986 1122 1362 2586 1566 642 1626 762 822 1806 882 1866 942 1062 2046 2106 1182 2166 1302 2286 1422 1482 2466 1542 2526 1602 g 요 d 셤 8 셤 요 g δ 셤 g 8 ઠે 8 ⋧ g 8 유 8 8 ð 8 셤 8 Š 셤 ò g ઠ a ð ò 8 ò ઠે

ઠે 쉽

```
1410
1590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2190

        702
        CGACATGCGGCCCACAGABACCGCACGAGCTGCCCATCCCCATCGTCAGTTGGA
        761

        1711
        UGACAUGCGGCCCACCAGAGAACCGCACGCCGCCCCAUCCCCCAUCACCUGA
        1770

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1891 CCGUGAACUGAGCUACGUGCUGCUGGCAGCAUCUUCCUGUGCUAUGCCACCACCUUCCU 1950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1002 CATGAGCATCAGCTACGCGGCCCTGCTGACCAAGCCGCATTTACCGCATCTTTGA 1061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               461
                                                                                                                                                                                                                                                                                                                                                                                               521
                                                                               281
                                                                                                                                                          341
                                                                                                                                                                                                                                      401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATGATCGCAGAGCCGGACCTGGGGGACCTGTTCGCTCCGCCGCCATCTTCCTAGGGCTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCAGGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCAT
                                                                                                                                                                                                                                        TGGCACCCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                                                                                                                                                                                                                   TGTAACCTTCAATGAGAACGGAGACGCACCGGGGCGCTACGACATCTACCAGTACCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AATAGAGCGGATGCAGTGGCCAGGGAGTGGCCAGCTGCCGCGCTCCATCTGCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCCCTGCCAGCCCGGGAGCGAAAGAAGACTGTGAAGGGCATGGCTTGCTGCTGCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCGGGAACTGAGCTACGTGCTGCTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATGCACCGTGACCTGTGTCCCCGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGGGACTCGCCGTGGCCGTGCCCCTTCCTGGCCGTGGTGGTGGCCATCGCCGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CACCTTCATCCTCATCTCCTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCCCACTCGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCCAGGG
                                                                                 GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCCATGGGCCCACGCGCTGCACGC
                                                                                                                                                          282
                                                                                                                                                                                                                                        342
                                                                                                                                                                                                                                                                                                                   402
                                                                                                                                                                                                                                                                                                                                                        1411
                                                                                                                                                                                                                                                                                                                                                                                                                                       1471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2191
                                                                                 222
                                                                                                                                                                                                                                                                                                                                                                                               462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1062
                                셤
                                                                                 ઠે
                                                                                                         ద
                                                                                                                                                      Š
                                                                                                                                                                                       셤
                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                    අ
                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
    δ
                        2646 CGGAGAGGCCAAGTCTGAGCTCTGCGAGAACCTTGAGGCCCCAGCGCTGGCCACCAAACA 2705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present invention relates to human metabotropic glutamate receptor (mGluR4) proteins and polynucleotides encoding such proteins. MGluR4 sequences of the invention are useful for treating acute and chronic neurodegeneration. They are also used as antipsychotic, anticonvulsant, analgesic, antidepressant and antiemetic agents. They are also useful for the diagnosis and/or treatment of conditions associated with an excess or deficiency of mGluR4. The present sequence is human mGluR4 RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            42 AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAGGCGCAACATCTGGTT 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New nucleic acid encoding human metabotropic glutamate receptor, useful e.g. in screening for specific agonists and antagonists for treating e.g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1051 AGGCUUCGACCGCUACUUCUCCAGCCGCACGCUGGACAACAACAGCGCGCAACAUCUGGUU
                                                                                                                                                                                                                                                                                                                                   Human; metabotropic glutamate receptor; mGluR4; neurodegeneration;
antipsychotic; anticonvulsant; analgesic; antidepressant; antiemetic;
gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag= a
/product= "Human metabotropic glutamate receptor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 83.8%; Score 1470.8; DB 6; Length 3431; Best Local Similarity 74.2%; Pred. No. 1.38-307; Matches 1271; Conservative 291; Mismatches 152; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 3431 BP; 648 A; 1128 C; 949 G; 0 T; 706 U; 0 Other;
                                                                                                                                                                                                                                                                                                                     Human metabotropic glutamate (mGluR4) receptor RNA.
                                                                                     2706 GACTTACGTCACTTACACCAACCATGCAATCTAG 2739
                                                             GACCTACGTCACCTACACCATGCCATCTAG 1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
26. .2764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; Col 23-26; 35pp; English
                                                                                                                                                                                                 BP.
                                                                                                                                                                                                 AAD38025 standard; RNA; 3431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18-AUG-2000; 2000US-00641318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              96US-0013189P.
97US-00816178
                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         & CO ELI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2002-442818/47.
P-PSDB; AAE23757.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    neurodegeneration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (ELIL ) LILLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12-MAR-1996;
12-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                         sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US6384205-B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Belagaje RM,
                                                                                                                                                                                                                                                                              10-SEP-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    07-MAY-2002
                                                             1722
                                                                                                                                                                                                                                      AAD38025
                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Key
                                                                                                                                                                           AAD3 8025

AAD3 8025

AAD4 AAD5

AAD
```

ઠે g ઠે 셤

```
요
                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                    g
                                                                                                                                                                           g
                                                                                                                                                                                      8
                                                                                                                                                                                                   요
                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                요
                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                              유
                                                                                                                                                                                                                                                                                                         ठे
                                                                                                                                                                                                                                                                                                                      а
                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                         જે
                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                     ò
                                                                                                                             셤
                                                                                                                                        જે
                                                                                                                                                                   ઠે
                                                                                                                                                                                                             ઠ
                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                1481
                                                                                                               1601
                                          1421
                                                     2430
                                                                                                   2550
                                                                                                                           2610
                                                                                                                                      1661
                                                                                                                                                  2670
                                                                                                                                                                          2730
                                                                CGGAGAGGCCAAGUCUGAGCUCUGCGAGAACCUUGAGGCCCCAGCGCUGGCCAAACA
GCTGATGGTCACGTGTACTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAA
                         GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGT
                                                                                                               CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGC
                                                                                                                                      CGTGGTCACCGCCCACCATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAA
                                                                                                                                            TGGGGAAGCCAAATCAGAGCTGTGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACA
                                                                                                                                                                                                                                                                           Human, metabotropic glutamate receptor, mGluR4; neurodegeneration,
antipsychotic, anticonvulsant, analgesic, antidepressant, antiemetic;
                                                                                                                                                                                                                                                                                                                                "Human metabotropic glutamate receptor"
                                                                                                                                                                                                                                                               metabotropic glutamate (mGluR4) receptor DNA
                                                                                                                                                                                           GACUUACGUCACUUACACCAACCAUGCAAUCUAG 2764
                                                                                                                                                                                     GACCTACGTCACCTACACCAACCATGCCATCTAG 1755
                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                             BP
                                                                                                                                                                                                                             AAD38024 standard; DNA; 3431
                                                                                                                                                                                                                                                                                                                                                                  2000US-00641318,
                                                                                                                                                                                                                                                                                                                                                                             96US-0013189P.
                                                                                                                                                                                                                                                                                                                   26. .2764
/*tag= a
/product= '
                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                               & CO ELI
                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2002-442818/47.
P-PSDB; AAE23757.
                                                                                                                                                                                                                                                                                                                                                                                                           Wu S;
                                                                                                                                                                                                                                                                                                                                                                                               (BLIL ) LILLY
                                                                                                                                                                                                                                                                                                   sapiens
                                                                                                                                                                                                                                                                                                                                                                  18-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                             12-MAR-1996;
12-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                           Belagaje RM,
                                                                                                                                                                                                                                                                                                                                           US6384205-B1
                                                                                                                                                                                                                                                    10-SEP-2002
                                                                                                                                                                                                                                                                                                                                                      07-MAY-2002
                                                     2371
                                                                                                    2491
                                                                                                                                                   2611
                                                                                                                                                              1662
                                                                                                                                                                          2671
                                                                                                                                                                                                                                                                                        ds.
                   1302
                              2311
                                          1362
                                                                 1422
                                                                             2431
                                                                                         1482
                                                                                                               1542
                                                                                                                           2551
                                                                                                                                      1602
                                                                                                                                                                                     1722
                                                                                                                                                                                                2731
                                                                                                                                                                                                                                                                Human
                                                                                                                                                                                                                                                                                                   Ношо
                                                                                                                                                                                                                                                                                                              Key
                                                                                                                                                                                                                        AAD3802
                                                  셤
                                                               ò
                                                                           g
                                                                                       ઠે
                                                                                                 셤
                                                                                                               ò
                                                                                                                         셤
                                                                                                                                    ઠે
                                                                                                                                                유
                                                                                                                                                             ò
                                                                                                                                                                         셤
                                                                                                                                                                                     8
                                                                                                                                                                                               g
                                                                                                                                                                                                                                  8
                             셤
                                          ò
```

```
1110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1651 CGAGCCTTGCACAGGGTACCAGGTGGACCGCTACACCTGTAAGACGTGTCCCTA 1710
                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1231 ecadedeaaderecaerrrerearedarecereraceceareseceacecerecaeee 1290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     821
                                                                                                                                                The present invention relates to human metabotropic glutamate receptor (mglluR4) proteins and polynucleotides encoding such proteins. WGluR4 sequences of the invention are useful for treating acute and chronic neurodegeneration. They are also used as antipsychotic, anticonvulsant, analgesic, antidepressant and antiemetic agents. They are also useful for the diagnosis and/or treatment of conditions associated with an excess or deficiency of mGluR4. The present sequence is human mGluR4 DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        881
                                         e.9
New nucleic acid encoding human metabotropic glutamate receptor, useful e.g. in screening for specific agonists and antagonists for treating e.g neurodegeneration.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATGCACCGGGATGTCCCCGGCGGGGGGGCTCTGCCCGCGCATGGACCCTGTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCGCAACGATTCTGCCGAGTACAAGGTCATTGGCTCCTGGACTGACCACCTGCACCTTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1351 TGGCACCCAGCTGCTTAAGTACATCCGAAACGTCAACTTCTCAGGCATCGCAGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1591 GCCCTGCCAACCGGGTGAGCGGAAGAGACAGTGAAGGGCATGCCTTGCTGCTGCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        822 GCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CATGCACCGTGACCTGTCCCCGCCGTAGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTAACCTTCAATGAGAACGGAGACGCACCCCCGGGCGCTACGACATCTACCAGTACCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAAGACCACCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          522 AATAGAGCGGATGCAGTGGCCAGGGAGTGGCCAGCTGCCGCGCTCCATCTGCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGGGACTCGCCGTGGCCGTGCTCCCTCTTCCTGGCCGTGGCGCATCGCCGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCCACGCGCTGCACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCCTGCCAGCCCGGGAAGCGAAGAAGAACTGTGAAGGGCATGGCTTGCTGGCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                42 AGGGTTCGACCGATACTTCTCCAGCCGCACGACGACAACAACAACAACATCTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                                                                                                                                                                                                                                                                                                                      83.8%; Score 1470.8; DB 6; Length 3431; llarity 91.1%; Pred. No. 1.3e-307; Conservative 0; Mismatches 152; Indels 0;
                                                                                                                                                                                                                                                                                                                               Sequence 3431 BP; 648 A; 1128 C; 949 G; 706 T; 0 U; 0 Other;
                                                                                                       Col 5-10; 35pp; English
                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
Matches 1562; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1531
                                                                                                         Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           642
                                                                                                                                                                                                                                                                                                                                                                             Query Match
```

CAMP.

Human; 88; gene; metabotropic glutamate receptor; mGluR4; umami; taste receptor; umami mimicking compound; monosodium L-glutamate;

```
1001
                                                                                                  2010
                                                                                                                            1001
                                                                                                                                                                            1121
                                                                                                                                                                                                                                                      2190
                                                                                                                                                                                                                                                                                 1241
                                                                                                                                                                                                                                                                                                         2250
                                                                                                                                                                                                                                                                                                                                                          2310
                                                                                                                                                                                                                                                                                                                                                                                    1361
                                                                                                                                                                                                                                                                                                                                                                                                           2370
                                                                                                                                                                                                                                                                                                                                                                                                                                     1421
                                                                                                                                                                                                                                                                                                                                                                                                                                                              2430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2670
                                                                                                                                                    2070
                                                                                                                                                                                                                              1181
                                                                                                                                                                                                                                                                                                                                  1301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1721
GITGITCGTGGTGATCACCTTTGTGCGCTACAACGACACGCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                                                                              CTCCCACTCGGTGGTGGACTTCCAGGACCAGCGGACACTCGACCCCCGCTTCGCCAGGG
                                                                        CATGATCGCAGAGCCGGACCTGGGGGACCTCGCTCCGCCGCGCATCTTCCTAGGGCTCGG
                                                                                                                                                                                                  GCTCATGGTCACGTGCACGTGTATGCCATCAAGACACGCGGGCGTGCCCGGAGACCTTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                       CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGTCGTTACGGCGGCCACCATGTCCAACAAGTTCACGCAGAAGGGCAACTTCCGGCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGAGAGGCCAAGTCTGAGCTCTGCGAGAACCTTGAGGCCCCAGCGCTGGCCACCCAAACA
                       CCGGGAACTGAGCTACGTGCTGCCGGGCATCTTTCTGTGCTACGCCACTACCTTCCT
                                       1951 chrchrickrichadecechecrredericerecerececentricriceredentation
                                                                                                                         CATGAGCATCAGCTACGCGGCCCTGCTGACCAAGACCGCATTTACCGCATCTTTGA
                                                                                                                                                 2011 GATGAGCATCAGCTATGCAGCCTTGCTCACCAAGACCAACCGCATCTACCGCATCTTCGA
                                                                                                                                                                                                                            CACCTTCATCCTCATCTCCCTGCAGCTGCTCGCCATCTGCGTGTGGTTCGTGGTGGACCC
                                                                                                                                                                                                                                                                              CTCCCACTCGGTGGACTTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCCAGGGG
                                                                                                                                                                                                                                                                                                                                  GCTGATGGTCACGTGTACTGTATACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGAGGCCAAGCCCATTGGCTTCACCATGTACACCACTGCATCGTCTGGCCTCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCCCATCTTCTTTGGCACCTCGCAGTCGGCCGACAAGCTGTACATCCAGACGACGACGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGGATGCTCTACATGCCCAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACGGTCTCGGTGAGTCTGAGCGCCTCGGTGTCCCTGGGAATGCTCTACATGCCCAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGCCTCAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGTGGTCACCGCCGCCACCATGTCCAAGAGTTCACAGAAGAGGGCAACTTCAGGCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGGGAAGCCAAATCAGAGCTGTGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GACCTACGTCACCTACACCAACCATGCCATCTAG 1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           882
                                                                        942
                                                                                                                         1002
                                                                                                                                                                                                                                                     2131
                                                                                                                                                                                                                                                                                                                                                          2251
                                                                                                                                                                           1062
                                                                                                                                                                                                                             1122
                                                                                                                                                                                                                                                                               1182
                                                                                                                                                                                                                                                                                                       2191
                                                                                                                                                                                                                                                                                                                                  1242
                                                                                                                                                                                                                                                                                                                                                                                    1302
                                                                                                                                                                                                                                                                                                                                                                                                                                    1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                             2371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2671
                                                                                                                                                                                                                                                                                                                                                                                                            2311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2731
                      ò
                                          윤
                                                                       ઠે
                                                                                            g
                                                                                                                        ઠે
                                                                                                                                            g
                                                                                                                                                                         δ
                                                                                                                                                                                                g
                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                     ద
                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
```

Novel metabotropic glutamate taste receptor which functions as a umami taste receptor, useful for screening for umami mimicking compounds.

31-MAR-2000; 2000US-0193454P 30-MAR-2001; 2001US-00820809

US2002151052-A1 Homo sapiens

(UYMI-) UNIV MIAMI.

SD;

Chaudhari N,

WPI; 2003-182515/18.

Page 16-17; 23pp; English.

The invention relates to a rat metabotropic glutamate taste receptor having a molecular weight of 68 kDa, mGluR4, appearing as ABG74133. Also included are an isolated mRNA molecule encoding mGluR4 appearing as ABX16097 (rat sequence) and the human homologue appearing as ABX16097, and ammalian cell transfected with cDNA encoding mGluR4 (the cDNA expressed in the mammalian cell is capable of being translated into immunologically recognisable metabotropic glutamate taste receptors) and screening samples for unami mimicking compounds (comprising: (a) transfecting samples for unami mimicking compounds (comprising: (a) transfecting caste receptor; (b) culturing the transfected cells in an environment that promotes expression of immunologically recognisable metabotropic glutamate taste receptors; (c) treating the transfected cells with a compound that induces cAMP production; (d) incubating the cells with a compound that induces cAMP production; (d) incubating the amount of sample containing a potential umami mimicking compound capable of binding to the metabotropic glutamate taste receptors; (e) measuring the amount of cAMP produced; and (f) correlating suppression of cAMP production with unami mimicking compound binding to the metabotropic glutamate taste ceceptors; (e) measuring the amount of cAMP produced; and (f) correlating suppression of cAMP production with the minimization and taste receptors and responds to monosodium L-glutamate binding by decreasing cellular level of cAMP. The cell is useful for screening for umami mimicking compounded. The cell is useful for screening for umami mimics. The present sequence 1255 1316 CAGCCACGTCAAGAAGTGCACCAACCGTGAGCGAATTGGGCAGGATTCAGCTTATGAGCA 1375 1435 161 341 1376 GGAGGGGAAGGTGCAGTTTGTGTGTGCCGTGTACGCCATGGGCCACGCGCTGCACGC 1436 CATGCACCGTGACCTGTGTCCCGGCCGCGGGGCTCTGCCCGCGCATGGACCCTGTAGA TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGGCCGCCACGCGCTCAAGAAGGG 162 AAGCCACATCAAGAAGTGCACCAACCGAGAGGGCATCGGGCAGGACTCGGCCTATGAGCA **GGAGGGGAAGGTGCAGTTCGTCATTGACGCTGTGTACGCCATGGGCCACĠCCCTGCACGC** CATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA Gaps Score 1470.8; DB 8; Length 3884; Pred. No. 1.4e-307; 0; Mismatches 152; Indels 0; Sequence 3884 BP; 734 A; 1265 C; 1080 G; 805 T; 0 U; 0 Other; human cDNA encoding mGluR4 83.8%; ilarity 91.1%; Conservative (Similarity Best Local Sim Matches 1562; 102 42 222 282 Query Match 셤 ઠે g g ò 셤 ò ઠે Š

1495

요

Human cDNA encoding metabotropic glutamate receptor mGluR4.

(first entry)

03-APR-2003

SXXXEXE

standard; cDNA; 3884

ABX16087 ABX16087;

ABX16087

1601 2755 2815 2875 1481 1661 G protein-coupled receptor; GPCR; antigenic peptide; gene therapy; G protein-coupled receptor modulator; antibody; immune-related disease; growth-related disease; cell regeneration-related disease; AIDS; cancer; immunological-related cell proliferative disease; autoimmune disease; Alzheimer's disease; atherosclerosis; infection; osteoarthritis; allergy; osteoporosis, cardiomyopathy; inflammation; Crohn's disease; diabetes; graft versus host disease; Parkinson's disease; multiple sclerosis; pain; psoriaals; anxiety; depression; schizophrenia; dementia, memory loss; mental retardation, epilepsy; asthma; tuberculosis; obesity; nausea; hypertension; hypotension; renal disorder; rheumatoid arthritis; trauma; ulcer; gene; ds. New isolated antigenic peptides e.g., for G protein-coupled receptors (GPCR), useful for diagnosing and designing drugs for treating conditions in which GPCRs are involved, e.g. AIDS, Alzheimer's disease, cancer or CGGAGGCCAAGTCTGAGCTCTGCGAGAACCTTGAGGCCCCAGCGCTGGCCACCAAACA (a CCCCATCTTCTTGGCACCTCGCAGTCGGCCGACAAGCTGTACATCCAGACGACGACGCT GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCCAAAGT GACGGTCTCGGTGAGTCTGAGCGCCTCGGTGTCCCTGGGAATGCTCTACATGCCCAAAGT CTACATCCATCCACCCGGGGCAGAACGTGCCCAAGCGCAAGCGCAAGCCTCAAAGC CGTGGTCACCGCCGCCACCATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAA CETCETTACGECGCCCACCATGTCCAACAAGTTCACGCAGAAGGGCAACTTCCGGCCCAA CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGC Human metabotropic glutamate receptor 4 nucleotide SEQ ID NO:175

Š 엄 ઠે QQ ò 셤 ò a Š 음 δ 셤 8 g

acida. Also described: (1) an assay for the detection of a particular G protein-coupled receptor (GPCR) or a candidate polypeptide in a sample; and (2) an isolated antibody having high specificity and high affinity or avidity for a particular GPCR. (1) can be used as GPCR modulators and in centerapy. The antigenic peptides for GPCRs are useful in detecting an antibodies. The particular GPCR, and in the production of specific antibodies. The peptides for GPCRs are also useful for detecting the centerapy. The antigenic peptides for GPCRs and antibodies are useful for detecting the CC GPCRs and antibodies are useful for diseases, cell corresponding GPCRs. The antigenic peptides for GPCRs and antibodies are useful for diseases, cell creating immune-related diseases, immunological-related diseases, cell creating immune-related diseases, immunological-related cell proliferative diseases, or autoimmune diseases, e.g. AIDS, Alzheimer's disease, calbearces albearces is second to viral infections, osteoarthritis, osteoporosis, cancer, cardiomyopathy, chronic and acute inflammation, allergies, Crohn's disease, diabetes, graft versus host disease, parkinson's disease, multiple sclarosis, pain, psoriasis, bear anxiety, depresented. ö loss, epilepsy, asthma, tuberculosis, obesity, nausea, hypertension, hypotension, renal disorders, rheumatoid arthritis, trauma, ulcers, or any chier disorder in which GPCRs are involved. The antibodies may be used in immunoassays and immunodiagnosis. ABZ42523 to ABZ42869 encode GPCR proteins given in ABPS1675 to ABP82018, which are used in the exemplification of the present invention 8568888888888888888888888888888888

Sequence 3884 BP; 734 A; 1265 C; 1080 G; 805 T; 0 U; 0 Other;

1375 1435 1555 1615 1256 TGCCGAGTTCTGGGAGGACAACTTCCACTGCAAGTGGGCCGCCCCCCCAGAAGGG 1315 1495 1675 AATAGAGCGGATGCACTGGCCGGGGAGCGGCAGCTGCCCCGCTCCATCTGCAGCTT 1735 GCCCTGCCAACCGGGTGAGCGGAAGAAGACAGTGAAGGGCATGCCTTGCTGCTGCTGGCACTG 1795 CGAGCCTTGCACAGGGTACCAGTACCAGGTGGACCGCTACACACTGTAAGACGTGTCCCTA 1855 281 341 161 221 401 461 521 641 701 CAGCCACGTCAAGAAGTGCACCAACCGTGAGCGAATTGGGCAGGATTCAGGTTATGAGCA GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGC GGAGGGGAAGGTGCAGTTTGTGATCGATGCCGTGTACGCCATGGGCCACGCGCTGCACGC CATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCCGTGGA CATGCACCGTGACCTGTGTCCCGGCCGCGGGGGCTCTGCCCGCGCATGGACCCTGTAGA TGGCACCCCAGCTGCTTAAGTACATCCGAAACGTCAACTTCTCAGGCATCGCAGGGAACCC AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAACAACAACATCTGGTT TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC TGTAACCTTCAATGAGAACGGAGGCGCACCGGGGGCGCTACGACATCTACCAGTACCAACT rergacerrearidadaricadariceceregecerrariadaricadariaceaer GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAG GCGCAACGATTCTGCCCGAGTACAAGGTCATTGGCTCCTGGACTGACCACCTGCACCTTAG **AATAGAGCGGATGCAGTGGCCAGGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCT** GCCCTGCCAGCCCGGGGAGCGAAAGAAGACTGTGAAGGGCATGGCTTGCTGCTGCACTG CGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTA 0; Gaps DB 8; Length 3884; Query Match 83.8%; Score 1470.8; DB 8; Length Best Local Similarity 91.1%; Pred. No. 1.4e-307; Matches 1562; Conservative 0; Mismatches 152; Indels 102 1316 222 1376 1436 342 1496 1556 1616 1676 1736 1796 42 162 282 402 462 522 582 642 유 g g g 셤 엄 ઠે 셤 ŝ ò ઠ g ઠે g ઠે a δ ò ò ઠે ઠે

ò

702	702 CGACATGCGGCCCACAGAGAACCGCAGCTGCCAGCCCATCCCCATCGTCAGTTGGA 761
762 1916	GTGGGACTCGCCGTGGGCGCCCCTTTCCTGGCCGTGGTGGGCATTCGCCGCCAC 821
822 1976	GCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGG 881
882	CCGGGAACTGAGCTACGTGCTGCTGCGGCATCTTTCTGTGCTACGCCACTACCTTCCT 941
942 2096	CATGATCGCAGAGCCGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGG 1001
1002 2156	CATGAGCATCAGCTACGCGGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGA 1061
1062 2216	GCAGGGCAAACGGTCGGTCAGTGCCCCGGGTTTCATCAGCCCGGCCTCGCAGCTGGCCTT 1121
1122 2276	ATCCTCATCTCCCTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGACCC
1182	TOGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCGGTTTGCCAGGGG
1242 2396	片二片
1302 2456	5=5
1362	は二は
1422 2576	122 CCCCATCTTTTTTGGCACCTCACGTCAGCCGACAAGCTGTACATCCAGACAACACGT 1481
1482 2636	#=#
1542 2696	g - g
1602 2756	A 16
1662 2816	172 A2
1722 2876	GACCTACGTCACCAACCAACCATCTAG 1755

임 ઠે 셤 ઠે 움 δ 셤 ò 요 ò 셤 ઠે g ò g ò 요

ઠે

401

461

581

```
2330
                                                                                                                                                                                                      2270
                                                                                                                                                                                                                                                               2210
                                                                                                                                                                                                                                                                                                                         2150
                                                                                                                                                                                                                                                                                                                                                                                  2090
                                                                                                                                                                                                                                                                                                                                                                                                                                            2030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1302 GCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAA 1361
                                                                                                                                                                                                                                     521
                                                                                                                                                                                                                                                                                                                                                      641
                                                                                                                                                                                                                                                                                                                                                                                                               701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    941
                                                                                                                                                                                                                                                                                                                                                                                                                                    CGAGCCTTGCACAGGGTACCAGTACCAGGTGGACCGCTACACACCTGTAAGACGTGTCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  eccereccaaccegereadcegaadadadacareaadcecarecerrecresere
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTTGTTCGTGGTGATCACCTTTGTGCGCTACAACGACGCCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGC
                CATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                         TGGCACCCAGCTGCTTAAGTACATCCGAAACGTCAACTTCTCAGGCATCGCAGGGAACCC
                                                                                                                                                                                                GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACTCAG
                                                                                                                                                                                                                                                                 ececaacearricreceaaracaacercarrecerecacercaceacercacercacerrae
                                                                                                                                                                                                                                                                                                                                                        CGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGACATGCGGCCCACAGAGAACCGCACGAGGTGCCAGCCCATCCCCATCGTCAAGTTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCGGGAACTGAGCTACTGCTGCTGGCGGCATCTTTCTGTGCTACGCCACTACCTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ccerchactroaccracercercecheccaccarcracercratecratecaccaccarcer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CATGATCGCAGAGCCGGACCTGGAGCACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        carcarcecreaecceaecrrescaecrescrescresceaeceaarcriceresaacrass
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CATGAGCATCAGCTACGCGGCCCTGACCAAGACCAACCGCATTTACCGCATCTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCAGGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CACCTTCATCCTCATCTCCCTGCAGCTGCTCGCCATCTGCGTGTGGTTCGTGGTGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTCCCACTCGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCCGCTTTGCCAGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGTGCTCAAGTGTGACATCTCGGACCTGTCGCTCATCTGCCTGGTGGGGCTACAGCATGCT
                                                                                                                                                                            TGTAACCTTCAATGAGAACGGAGACGCACCGGGGGGCGTACGACATCTACCAGTACCAACT
                                                                                                                                                                                                                                                                                              AATAGAGCGGATGCAGTGGCCAGGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCT
                                                                                                                  TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                    342
                                                                                                                                                 2389
                                                                                                                                                                                                                                                                                                                           2209
                                                                                                                                                                                                                                                                                                                                                                                     2149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1549
 222
                             2509
                                                          282
                                                                                     2449
                                                                                                                                                                              402
                                                                                                                                                                                                        2329
                                                                                                                                                                                                                                     462
                                                                                                                                                                                                                                                                  2269
                                                                                                                                                                                                                                                                                               522
                                                                                                                                                                                                                                                                                                                                                        582
                                                                                                                                                                                                                                                                                                                                                                                                                  642
                                                                                                                                                                                                                                                                                                                                                                                                                                             2089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1182
                                                                                                                                                                                                                                                                                                                                                                            쉱
                                                                                                                                                                                                                                                                                                                                                                                                                                    원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                     Q
                                                                                                                                         g
                                                                                                                                                                           ठ
                                                                                                                                                                                                g
                                                                                                                                                                                                                            ठ
                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                   요
                                                                                                                                                                                                                                                                                                                                               ⋧
                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                        8 8
                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention comprises the amino acid and coding sequences of novel proteins. The DNA and protein sequences of the invention are useful as: markers for tissues in which the corresponding protein is preferentially expressed; as molecular weight markers on gels; as chromosome markers or tags; to identify chromosomes or to map related gene positions; and to compare with endogenous DNA sequences in patients to identify potential genetic disorders. The present DNA sequence represents a gene of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New polynucleotides, useful for expressing recombinant proteins for analysis, characterization or therapeutic use, or as markers for tissues in which the corresponding protein is preferentially expressed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wang J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAGGCGCAACATCTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Wang
                                                                                                                                                               novel gene; novel protein; tissue marker; molecular weight marker;
chromosome marker; genetic disorder; gene; ds.
                                                                                                                                  coding sequence (useful for identifying genetic disorders)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 1470.8; DB 10; Length 3884;
Pred. No. 1.46-307;
0; Mismatches 152; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 3884 BP; 805 A; 1080 C; 1265 G; 734 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           J, Zhao QA,
Drmanac RT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zhang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KW, Ren F, Zhang
Weng G, Zhou P,
Boyle BJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; SEQ ID NO 351; 1177pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Goodrich RW,
                                             BP
                                                                                                                                                                                                                                                                                                                        10-DEC-2001; 2001US-0339739P.
11-DEC-2001; 2001US-0339453P.
14-MAR-2002; 2002US-036591P.
14-MAR-2002; 2002US-0365384P.
12-APR-2002; 2002US-0372381P.
12-APR-2002; 2002US-037261SP.
22-APR-2002; 2002US-0012658.
24-APR-2002; 2002US-0376045P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         J, Wehrman T,
Chen R, Xu C,
                                             DNA; 3884
                                                                                                                                                                                                                                                                                                 2002WO-US039555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 91.1%;
Matches 1562; Conservative (
                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Asundi V,
Xue AJ, W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2003-569235/53.
P-PSDB; ADE08196.
                                             standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                        WO2003054152-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wang D,
                                                                                                                                                                                                           Unidentified
                                                                                                                                                                                                                                                                                                 10-DEC-2002;
                                                                                                                                                                                                                                                                    03-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   102
                                             ADE07285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               162
                                                                          ADE07285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ghosh M,
                                                                                                                                   Novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ma Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tang
                  RESULT
```

1121

1241 1490

셤 ò 쉱 ઠે

ઠે

neuropathology

```
The microarray is useful in diagnostics and treatment regimens, drug discovery and development, toxicological and carcinogenicity studies, discovery and development, toxicological and carcinogenicity studies, corensiates and pharmacogenomics. The microarray is also useful for monitoring progression of diseases and for developing sophisticated profiles for the effects of currently available therapeutic drugs. The combination is also useful for purifying a subpopulation of mRNNs, cond genomic fragments and in research and diagnostic applications. The array can detect changes in expression in a large number of genes coding carcay can detect changes in expression in a large number of genes coding various diseases including cancer e.g. adenocarcinoma and leukaemis. Immunopathise e.g. AlbS and asthma, neuropathise e.g. Alzheimer's disease immunopathise e.g. Alzheimer's disease communopathise e.g. Alzheimer's disease probe of the invention. Note: The sequence data for this patent did not format directly from USPTO at
      cancer and immunopathology and
                                                                                                                                                                                                                                        segdata.uspto.gov/seguence.html?DocID=06500938Bl
      ŏ
                                                                                                                                                                                                                                                                                                              Best Local Similarity 91.1
Matches 1562; Conservative
    diagnosis and treatment
The microarray is useful
                                                                                                                                                                                                                                                                                                                                                            42
                                                                                                                                                                                                                                                                                                                                                                                                                                                  1256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             762
                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 582
    ઠે
                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    පු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                             1421
                                                                          1310
                                                                                                        1481
                                                                                                                                                                  1541
                                                                                                                                                                                                                          1601
                                                                                                                                                                                                                                                                                   1661
                                                                                                                                                                                                                                                                                                                                                           CGGAGAGGCCAAGTCTGAGCTCTGCGAGAACCTTGAGGCCCCAGCGCTGGCCACCAAACA 1010
                GCTCATGGTCACGTGCACCGTGTATGCCATCAAGACACGCGGCGTGCCCGAGACCTTCAA 1370
                                                                                                                                                                                                                                        cercerracecceccaccarerereasarreacecasaasecracriceseceaa 1070
                                                                                                                                                                                                                                                                                                                                           1662 TGGGGAAGCCAAATCAGAGCTGTGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAAA 1721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to a combination which, comprises a number of polynuclectide probes comprising a sequence selected from one of the 1490 sequences mentioned in the specification. The combination is useful as an array element in a microarray for monitoring the expression of a number of target polynucleotides. The microarray is particularly useful in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; probe; ss; array element; Parkinson's disease;
signalling pathway population; cancer; adenocarcinoma; leukaemia;
immunopathy; AIDS; asthma; neuropathy; Alzheimer's disease; microarray.
                                                                                                        CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACT
                                                                                                                                                                                            1249 GACGGTCTCGGTCAGTCTGAGCGCCTCGGTGTCCTGGGAATGCTCTACATGCCCAAAGT
                                                                                                                                                                                                                                                                                   CGTGGTCACCGCCCACCATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAA
                                                                         1369 réadeccaarcecarrescriteaceargracaceaerrecarcererescries de constructor
                                                                                                                                  1309 ccccarcrrcrrregcaccrcccagrcccccaaccagracarccagacaacaacaccr
                                                                                                                                                                GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCCAAAGT
                                                                                                                                                                                                                         CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGC
Combination of polynucleotide probes, useful as array elements microarray for monitoring the expression of a number of target
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human signalling pathway polynucleotide probe SEQ ID NO 1074
                                                                                                                                                                                                                                                                                                                                                                                                      GACCTACGTCACCTACACCAACCATGCCATCTAG 11755
                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; SEQ ID NO 1074; 65pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ВР
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACA56476 standard; cDNA; 3884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98US-00016434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98US-00016434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (INCY-) INCYTE GENOMICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Seilhamer JJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2003-352189/33.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       polynucleotides.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US6500938-B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-JAN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-JAN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   06-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31-DEC-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ٦,
                                             1362
                                                                                                        1422
                                                                                                                                                                                                                                                                                                              1129
                                                                                                                                                                                                                                                                                                                                                                         1069
                                                                                                                                                               1482
                                                                                                                                                                                                                         1542
                                                                                                                                                                                                                                                      1189
                                                                                                                                                                                                                                                                                 1602
                                                                                                                                                                                                                                                                                                                                                                                                    1722
                                                                                                                                                                                                                                                                                                                                                                                                                                 1009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Au-Young
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                    셤
                                                                                                    ઠે
                                                                                                                              셤
                                                                                                                                                             δ
                                                                                                                                                                                      g
                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                             g
```

1255 1615 1675 1375 1435 1495 1555 1795 ö 1856 TGACATGCGGCCCACAGAGAACCGCACGGGCTGCCGGCCCATCCCCCATCAAGCTTGA 1915 161 341 461 581 641 701 821 401 761 TGTGACCTTCAATGAGAATGGAGATGCGCCTGGGCGCTATGACATCTACCAGCT 1316 CAGCCACGTCAAGAAGTGCACCAACCGTGAGCGAATTGGGCCAGGATTCAGCTTATGAGCA TGGCACCCAGCTGCTTAAGTACATCGAAACGTCAACTTCTCAGGCATCGCAGGGAACCC AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAGGCGCAACATCTGGTT 1196 AGGCTTCGACCGCTACTTCTCCAGCCGCACGCTGGACAACAACCACCGGCGCAACATCTGGTT 102 TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG 1376 GGAGGGGAAGGTGCAGTTTGTGATCGATGCCGTGTACGCCCATGGGCCACGCGCTGCACGC carecaccereaccrererecedecedecerededecrerecedederedecererada GCCCTGCCAACCGGGTGAGCGGAAGAAGAAGACGGTGAAGGGCATGCCTTGCTGCTGGCACTG ceaeccrrecacaegraccaeraccaegreeaccecracaccreraaeacererecera 162 AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAG AATAGAGCGGATGCCAGTGGCCAGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCT GCCCTGCCAGCCCGGGGAGCGAAAGAAGACTGTGAAGGGCATGGCTTGCTGCTGGCACTG CGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTA GGAGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCACGCCTGCACGC CATGCACCGTGACCTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA TGTAACCTTCAATGAGAACGGAGACGCACCGGGGCGCTACGACATCTACCAGTACCAACT CGACATGCGGCCCACAGAGAACCGCACGAGGTGCCAGCCCCATCCCCATCGTCAAGTTGGA GTGGGACTCGCCGTGGCCGTGCTCCTCTTCCTGGCCGTGGTGGGCATCGCCGCCAC TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC DB 10; Length 3884; ; 0 Sequence 3884 BP; 734 A; 1265 C; 1080 G; 805 T; 0 U; 0 Other; 83.8%; Score 1470.8; DB 10; Lengt 91.1%; Pred. No. 1.4e-307; ive 0; Mismatches 152; Indels

#1074.

Human polynucleotide probe

(first entry)

22-APR-2004

```
2095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1661
                                                                                                                                          2035
                                                                                                                                                                                                                                                                                                                                                                                                                         1061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2875
                                                                                                                                                                                                                                                                                                              1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGGGAAGCCAAATCAGAGCTGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACA 1721
                                                                                                                                                                                                    941
GATGAGCATCAGCTATGCAGCCCTGCTCACCAAGACCAACCGCATCTACCGCATCTTCGA
                                                                                                                                          GTTGTTCGTGGTGATCACCTTTGTGCGCTACAACGACGCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                      CCGTGAACTGAGCTACGTGCTGGCAGCATCTTCCTGTGCTATGCCACCTTCCT
                                                                                                                                                                                                                                                                                                                 CATGATCGCAGAGCCGGACCTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGG
                                                                                                                                                                                                                                                                                                                                                                     CATGATCGCTGAGCCCGACCTTGGCACCTGCTCGCTGCGCCGAATCTTCCTGGGACTAGG
                                                                                                                                                                                                                                                                                                                                                                                                                         CATGAGCATCAGCTACGCGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCAGGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCAGGGCAAGCGCTCGGTCAGTGCCCCACGCTTCATCAGCCCCGCCTCACAGCTGGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CACCTTCATCCTCATCTCCCTGCAGCTGCTCGGCATCTGCGTGGTTCGTGGTGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTCCCACTCGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTCCCACTCGGTGGTGGACTTCCAGGACCAGCGGACACCTCGACCCCCGCTTCGCCAGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rerecreasergacarcresacererecrerearesecresecrassecrassecr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTGATGGTCACGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTCATGGTCACGTGCACCGTGTATGCCATCAAGACACGCGGCGTGCCCGAGACCTTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ceccarerretriesca cerescastes escastes de la contra dela contra de la contra del la contra dela contra de la contra de la contra de la contra del la contr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACGGTCTCGGTGAGTCTGAGCGCCTCGGTGTCCCTGGGAATGCTCTACATGCCCAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCCAAGCGCAAGCGCAAGCCTCAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGTGGTCACCGCCGCCACCATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGTCGTTACGGCGGCCCACCATGTCCAACAAGTTCACGCAGAAGGGCAACTTCCGGCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cegaegaeccaaercreaegecereceaaacerreaegececaeccaeccaecaaaca
                                                                                                                                                                                                    CCGGGAACTGAGCTACGTGCTGCTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACCTACGTCACCTACACCATGCCATCTAG 1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACTTACGTCACTTACACCAACCATGCAATCTAG 2909
                                                                                                                                                                                                                                                     2036
                                                                                                                                                                                                                                                                                                                                                                     2096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2876
                               1916
                                                                                      822
                                                                                                                                          1976
                                                                                                                                                                                                                                                                                                              942
                                                                                                                                                                                                                                                                                                                                                                                                                         1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1722
                                                                                                                                                                                                    882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2336
                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                   à
                                                                                                                                    셤
                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
```

```
Human; probe; 88; receptor-like polypeptide; transducing polypeptide; effector-like polypeptide; cancer; immunopathology; neuropathology; drug development; toxicology; carcinogenicity; signalling pathway polypeptide; adrenal gland; bladder; bone; bone marrow; brain; breaat; cervix; tumour; immunopathology; diabetes; pancreatitis; osteoporosis; ulcerative colitis; neuropathology; dementia; amnesia; epilepsy; Alzheimer's disease; depression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCGCGCGCTCAAGAAGGG 161
                                                                                                                                                                                                                                                                                                            elements in a microarray for monitoring the expression of target polynucleotides or purifying a subpopulation of mRNAs, cDNA, or genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAGGCGCAACATCTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                   composition comprising polynucleotide probes, useful as array
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 3884;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          °,
                                                                                                                                                                                                                                                                                                                                                                         invention relates to a composition of polynucleotide probes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 3884 BP; 734 A; 1265 C; 1080 G; 805 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 1470.8; DB 12; Lengt
Pred. No. 1.4e-307;
); Mismatches 152; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      obtained in electronic format directly from USPTO at
                                                                                                                                                                                                                                                                                                                                                   Claim 6; SEQ ID NO 1074; 73pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               seqdata.uspto.gov/sequence.html.
                                                                                                                                                                                               26-NOV-2002; 2002US-00305720
                                                                                                                                                                                                                  98US-00016434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        83.8%;
                                                                                                                                                                                                                                       (INCY-) INCYTE GENOMICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 83.8%;
Best Local Similarity 91.1%;
Matches 1562; Conservative
                                                                                                                                                                                                                                                          Seilhamer
                                                                                                                                                                                                                                                                               WPI; 2004-090520/09.
                                                                                                                                                      JS2004010136-A1
                                                                                                                                                                                                                   30-JAN-1998;
                                                                                                                                   Homo sapiens
                                                                                                                                                                           15-JAN-2004
                                                                                                                                                                                                                                                           ۵,
                                                                                                                                                                                                                                                                                                                                  fragments
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1196
                                                                                                                                                                                                                                                           Au-Young
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        102
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
```

ö

BP

ADI56272 standard; DNA; 3884

ADI56272;

ADIS6272 ID ADIS XX AC ADIS

1421

1481

2695

2815

1661

셤

6 6 6

8 B

8 4 8 4 8 4 8 8

```
2456 GCTCATGGTCACGTGCACCTGTATGCCATCAAGACACGCGGGGTGCCCGAGACCTTCAA
                                                                                                                                    CGTCGTTACGGCGCCCCCCATGTCCAACAAGTTCACGCAGAAGGGCAACTTCCGGCCCCAA
                                                                                                                                                                                                                                                                                                                                                                                        TGGGGAAGCCAAATCAGAGCTGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACA
                                                                                                                                                                                                                                                                                                                                                                                                                2816 cdadaddcchadrcrcadcrcrdcdadadccrrdaddcchdcdadca
                                                                                                                    CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGC
                                                                                                                                                                                                                                                                                                                                   CGTGGTCACCGCCGCCACCATGTCCAACAAGTTCACACAAAAGGGCAACTTCAGGCCCAA
                                     2396 rerecreaserereacarcreeaccrerecererereresereseracacarecr
                                                                 gcreargercacereracreratececcarcaagaccceaagaccceaagaccrrcaa
                                                                                                                                                                         CCCCATCTTTTTGGCACCTCACAGTCAGCGACAAGCTGTACATCCAGACAACCACACT
                                                                                                                                                                                        CCCCATCTTCTTTGCCACCTCGCAGCCGACAAGCTGTACATCCAGACGACGACGACGCT
                                                                                                                                                                                                                             GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGT
                                                                                                                                                                                                                                          CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAAGCCCTCAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /*tag= a
/product= "urological diBorder related protein 115"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human urological disorder related protein 115 encoding cDNA SEQ:65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              urological disorder, uropathic, cytostatic, urinary incontinence,
benign prostatic hyperplasia; human; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                            GACCTACGTCACCACCACCATGCCATCTAG 1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualiflers
171. .2909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15-JAN-2003; 2003US-0440318P.
04-FEB-2003; 2003US-044783P.
27-MAR-2003; 2003US-0457901P.
08-MAY-2003; 2003US-0468775P.
19-MAY-2003; 2003US-0478742P.
16-JUN-2003; 2003US-0488529P.
30-JUL-2003; 2003US-0498529P.
02-SEP-2003; 2003US-049156P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADQ89113 standard; cDNA; 3884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2004WO-US000750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO2004065576-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14-JAN-2004;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-AUG-2004
                                                                 1302
                                                                                                                    1362
                                                                                                                                                                        1422
                                                                                                                                                                                                  2576
                                                                                                                                                                                                                             1482
                                                                                                                                                                                                                                                      2636
                                                                                                                                                                                                                                                                                1542
                                                                                                                                                                                                                                                                                                          2696
                                                                                                                                                                                                                                                                                                                                     1602
                                                                                                                                                                                                                                                                                                                                                              2756
                                                                                                                                                                                                                                                                                                                                                                                        1662
                                                                                                                                                                                                                                                                                                                                                                                                                                               1722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2876
               1242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADQ89113;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8 8
                                                         ઠ
                                                                                  g
                                                                                                            දු පු
                                                                                                                                                               ò
                                                                                                                                                                                           g
                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                               음 장
                                                                                                                                                                                                                                                                                                     8 8
                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                કે
                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                   1375
                                                                                                      1435
                                                                                                                                                                                                                1555
                                                                                                                                                                                                                                                                  1615
                                                                                                                                                                                                                                                                                                                       1675
                                                                                                                                                                                                                                                                                                                                                                          1735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2395
                                                                                                                                                           1495
                                                                                                                                                                                                                                                                                                                                                                                                                    1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1241
1256 TGCCGAGTTCTGGGAGACAACTTCCACTGCAAGCTGAGCCGCCCACGCCCTCAAGAAGGG 1315
                                                                                                                                 341
                                                                             281
                                                                                                                                                                                      401
                                                                                                                                                                                                                                          461
                                                                                                                                                                                                                                                                                              521
                                                                                                                                                                                                                                                                                                                                                   581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   821
                                                                                                                                                                                                                                                                                                                                                                                                                                                          701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          941
                                                                                                                                                                                                                                                                                                         1616 GCGCAACGATTCTGCCGAGTACAAGGTCATTGGCTCCTGGACTGACCACCTGCACCTTAG
                                                                                           GGAGGGGAAGGTGCAGTTTGTGATCGATGCCGTGTACGCCATGGGCCACGCGCTGCACGC
                                                                                                                                                                                                                                                        CTCCCACTCGGTGGACTTCCAGGACCAGCGGACACTCGACCCCCGCTTCGCCAGGGG
                                        CATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGGAACCC
                                                                                                                                                                                                    TGGCACCCAGCTGATATAGTACATCCGAAACGTCAACTTCTCAGGCATCGCAGGGAACCC
                                                                                                                                                                                                                                                                                                                                                              GTTGTTCGTGGTGATCACCTTTGTGCGCTACAACGACACGCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCGGGAACTGAGCTACGTGCTGCTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CATGATCGCAGAGCCGGACCTGGGGCCTCGCTCCGCCGCCATCTTCCTAGGGCTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATGATCGCTGAGCCCGACCTTGGCACCTGCTCGCTGCGCCGAATCTTCCTGGGACTAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATGAGCATCAGCTACGCGGCCCTGCTGACCAACCAACCGCATTACCGCATCTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCAGGGCAAGCGCTCGGTCGATGCCCCACGCTTCATCACCCCCGCCTCACAGCGCCTGATAGCTGGCCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    caccrrcaccrcarcrcccrccaccrccrcaccarcrcacrcrcaccrrcaccc
                          AAGCCACATCAAGAAGTGCACCAACCGAGAGGCGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                             GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGC
                                                                                                                                                                                                                                         TGTAACCTTCAATGAGAACGGAGACGCACCGGGGCGCTACGACATCTACCAGTACCAACT
                                                                                                                                                                                                                                                                                              GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAG
                                                                                                                                                                                                                                                                                                                                                 AATAGAGCGGATGCAGTGGCCAGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                      GCCCTGCCAGCCCGGGGAGCGAAAGAAGAAGTGTGAAGGGCATGGCTTGCTGCTGGCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACTGTAAGACCTGCCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGACATGCGGCCCACAGAGCGCCCACGCGCCCAGCCCCATCGTCGAGTTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GATGAGCATCAGCTATGCAGCCCTGCTCACCAAGACCAACCGCATCTACCGCATCTTCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCAGGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACCTTCATCCTCATCTCCCTGCAGCTGCTCGCCATCTGCGTGGTTCGTGGTGGTGGTGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTCCCACTCGGTGGACTTCCAGGACCAACGGACACTTGACCCCCCGCTTTGCCAGGGG
                          162
                                                                                                      1376
                                                                                                                                                          1436
                                                                                                                                                                                      342
                                                                                                                                                                                                               1496
                                                                                                                                                                                                                                                                                                                                                                          1676
                                                                                                                                                                                                                                                                                                                                                                                                                               1736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2336
                                                                            222
                                                                                                                                 282
                                                                                                                                                                                                                                         402
                                                                                                                                                                                                                                                                                              462
                                                                                                                                                                                                                                                                                                                                                 522
                                                                                                                                                                                                                                                                                                                                                                                                        582
                                                                                                                                                                                                                                                                                                                                                                                                                                                           642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1182
```

8 6 8 6

8 8 8

중 읍

성 음

8 6 8

ઠે

8 8 8

8 6 8 6

Wed

```
The present invention describes the use of polypeptides related to urological disorders for identifying a compound capable of treating a urological disorder, identifying a subject having a urological disorder, or treating a subject having a urological disorder.

Or treating a subject having a urological disorder. Also described: (1) a method for identifying a compound capable of treating a urological disorder; and (3) a method for treating a subject having a urological disorder; and (3) a method for treating a subject having a urological disorder. The compound has uropathic and cytostatic activities. The polypeptides related to urological disorders are useful for identifying a compound capable of treating a urological disorder, identifying a subject having a urological disorder include urinary incontinence and benign prostatic hyperplasia. The present sequence encodes a human urological disorder in the exemplification of the present
                                                                                                                                                                                      Use of polypeptides related to urological disorders, e.g. 44390, 54181, 211 or for identifying a compound capable of treating a urological disorder or identifying and treating a subject having a urological
                                                                                  S
                                                                                  Eliasof
                                                                                                                                                                                                                                                                                                 Claim 1; SEQ ID NO 65; 542pp; English
                                                                                  Silos-Santiago I,
26-SEP-2003; 2003US-0506332P
                                        MILLENNIUM PHARM
                                                                                                                          2004-562167/54.
                                                                                                                            WPI; 2004-562167/
P-PSDB; ADQ89114.
                                                                                  Karicheti V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  invention.
                                                                                                                                                                                                                                                         disorder
                                          (MILL-)
```

1435 1495 1555 1615 1735 1315 ö 281 341 401 461 581 161 221 GCGCAACGATTCTGCCGAGTACAAGGTCATTGGCTCCTGGACTGACCACCTGCACCTTAG AGGGTTGGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAACGGCGCAACATCTGGTT 1196 AGGCTTCGACCGCTACTTCTCCAGCCGCACGCTGGACAACCGGCGCAACATCTGGTT TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGC GGAGGGGAAGGTGCAGTTTGTGATCGATGCCGTGTACGCCATGGCCACGCGCTGCACGC CATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC TGGCACCCCAGCTTAAGTACATCCGAAACGTCAACTTCTCTCAGGCATCGCAGGGAACCC AATAGAGGGGATGCAGTGGCCAGGAGTGGCCAGCTGCCGGGCTCCATCTGCAGTT AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA TGTAACCTTCAATGAGAACGGAGGCGCACCGGGGCGCTACGACATCTACCAGTACCAACT Gaps Query Match 83.8%; Score 1470.8; DB 13; Length 3884; Best Local Similarity 91.1%; Pred. No. 1.4e-307; Matches 1562; Conservative 0; Mismatches 152; Indels 0; (Sequence 3884 BP; 734 A; 1265 C; 1080 G; 805 T; 0 U; 0 Other; 162 1616 42 102 1376 1436 1496 1556 282 342 402 462 522 222

유

ઠે

g

ઠે

Š

9 9 9

ò g 8 셤 δ g ò g

ઠે

2815

1975 2095 2155 2215 2275 2335 1241 2395 1301 2455 1361 1421 2575 1481 2635 1541 2695 1601 2755 1661 1855 1915 2035 1001 1061 1121 1181 641 701 761 821 881 941 CTACATCATCCTCTTCCACCCGGAGGAGAGACGTGCCCAAGCGCAAGCGCAGTCTCAAAGC GCCCTGCCAACCGGGTGAGCGGAAGAAGACAGTGAAGGGCATGCCTTGCTGCTGCCACTG GCCCTGCCAGCCCGGGGAAGAAGAACTGTGAAGGGCATGGCTTGCTGCTGGCACTG ceaeccrrecacaeegraccaegraccaegreegaccecracaccretaaaeaceretaa TGACATGCGGCCCACAGAGAACCGCACGGGCTGCCGGCCCCATCCCCCATCATCAAGCTTGA GTTGTTCGTGGTGATCACCTTTGTGCGCTACAACGACACGCCCATCGTCAAGGCCTCGGG CATGATCGCAGAGCCGGACCTGGGCGTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGG GATGAGCATCAGCTATGCAGCCCTGCTCCACCAAGACCAACCGCATCTACCGCATCTTCGA ecaedecaagecrocercagrececeaecerreareaececececercaeaececear GCTGATGGTCACGTGTACTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAA CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACT GACGGTCTCGGTGAGTCTGAGCGCCTCGGTGTCCTGGGAATGCTCTACATGCCCAAAGT CGTGGTCACCGCCGCCACCATGTCCAACAAGTTCACACAGAAGGGCCAACTTCAGGCCCAA GCTGTTCGTGGTCACGTTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGG CCGGGAACTGAGCTACGTGCTGCCGGCGATCTTTCTGTGCTACGCCACTACCTTCCT CATGAGCATCAGCTACGCGGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGA GCAGGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCAT GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGT CGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCTA CGACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCCATCCCCATCGTCAAGTTGGA CACCTTCATCCTCATCTCCCTGCAGCTGCTCGCCATCTGCGTGTGGTTCGTGGTGGACCC 1002 2396 1362 2516 2576 582 1736 642 1796 702 1856 1916 822 1976 882 2036 942 2096 2156 1062 2216 1122 2276 1182 2336 1242 1302 2456 1422 1482 2636 1542 2696 1602 762 셤 8 8 ò g 쉽 8 6 ò g ò 셤 ò a 8 6 õ 8 8 ద ò 셤 ∂ 유 ò 셤 ò ò g ઠે 용 જે 셤 8

셤

ð

셤

ઠે

```
1552
                                                                                                                                                  1612
                                                                                                                                                                                            1672
                                                                                                                                                                                                                                      1732
                                                                                                                                                                                                                                                                                                                                                                                                                 1972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2392
                                                                                                                                                                                                                                                                                1792
                                                                                                                                                                                                                                                                                                                           1852
                                                                                                                                                                                                                                                                                                                                                                      1912
                                                                                                                                                                                                                                                                                                                                                                                                                                                          2032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAA 1361
                                                                                                                              461
                                                                                                                                                                                                                                                             641
                                                                                                                                                                                                                                                                                                                                                  761
                                                                                    401
                                                                                                                                                                                                                  581
                                                                                                                                                                                                                                                                                                       701
                                                                                                                                                                                                                                                                                                                                                                                             821
                                                                                                                                                                                                                                                                                                                                                                                                                                      881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 941
                                                                                                                                                                                                                                                                                                                                                222 GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGC
1373 GGAGGGGAAGGTGCAGTTTGTGATCGATGCCGTGTACGCCATGGGCCACGCGCTGCACGC
                                                     1433 CATGCACCGGATGACCTGTGTCCCGGCGGGGGGGCTCTGCCCGGGGATGGACCCTGTAGA
                                                                                             1493 TGGCACCCAGCTGCTTAAGTACATCCGAAACGTCAACTTCTCAGGCATCGCAGGGAACCC
                                                                                                                                                                                    GCCCTGCCAACCGGGTGAGCGGAAGACAGAGAAGAGGGCATGCCTTGCTGCTGCTGCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                        CCGTGAACTGAGCTACGTGCTGCTGCTGCGATCTTCCTGTGCTATGCCACCACCCTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGAGCCTTGCACAGGGTACCAGTACCAGTGGACCGCTACACCCTGTAAGACGTGTCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCAGGGCAAACGGTCAGTGCCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAG
                                                                                                                                                                                                                  AATAGAGCGGATGCAGTGGCCAGGAGTGGCCAGCTGCCGCCTCCATCTGCAGTCT
                                                                                                                                                                                                                                                              GCCCTGCCAGCCCGGGGAGCGAAAGAAGACTGTGAAGGGCATGGCTTGCTGCTGGCACTG
                                                                                                                                                                                                                                                                                                       CGAGCCCTGCACCGGGTACCAGTAGACGGCCGCTACACCTGTAAGACCTGCCCCTA
                                                                                                                                                                                                                                                                                                                                                                                             CATGCACCGTGACCTGTGTCCCCGCCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                               TGTAACCTTCAATGAGAACGGAGACGCACCGGGGGCGCTACGACTCTACCAGTACCAACT
                                                                                                                                                                                                                              CCGGGAACTGAGCTACGTGCTGCTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CATGATCGCAGAGCCGGACCTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATGAGCATCAGCTACGCGGCCCTGCTGACCAAGACCGCATTTACCGCATCTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            342
                                                                                                                                                                                             1613
                                                                                                                                                                                                                   522
                                                                                                                                                                                                                                                                                  1733
                                                                                                                                                                                                                                                                                                       642
                                                                                                                                                                                                                                                                                                                             1793
                                                                                                                                                                                                                                                                                                                                                                                                                   1913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1302
                                          282
                                                                                                                               402
                                                                                                                                                                          462
                                                                                                                                                                                                                                                              582
                                                                                                                                                                                                                                                                                                                                                                                             762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             942
                g
                                         ઠ
                                                        요
                                                                                   ò
                                                                                                   g
                                                                                                                        ਠੇ
                                                                                                                                              셤
                                                                                                                                                                        ઠે
                                                                                                                                                                                        원
                                                                                                                                                                                                           ે
                                                                                                                                                                                                                                    ద
                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                               8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           දි රි
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                     2875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA from the human cerebellum was used to construct a cDNA library, cDNA was amplified by PCR primers (AAT03896-97) based on rat mGluR4 sequences and with the primers given in AAT03898-99 to obtain cDNA encoding human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New isolated human metabotropic glutamate receptors - used for detection, diagnosis and therapy of diseases associated with the receptors, eg. stroke, epilepsy and Alzheimer's disease.
AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAGGCGCAACATCTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1193 AGGCTTCGACCGCTACTTCTCCAGCCGCACGACGACAACAACCACGCGCACAACATCTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          83.7%; Score 1469.2; DB 2; Length 3880;
llarity 91.1%; Pred. No. 3e-307;
Conservative 0; Mismatches 153; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        T; 0 U; 0 Other;
                                                                                                                                                                                                       Metabotropic glutamate receptor 4; mGluR4; stroke; epilepsy;
Alzheimer disease; detection; diagnosis; therapy; ds.
                                        GACCTACGTCACCTACACCATGCCATCTAG 1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 3880 BP; 734 A; 1264 C; 1080 G; 802
                                                                                                                                                                                                                                                          Location/Qualifiers
171. .2909
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 4; Page 35-40; 55pp; English.
                                                                                                                     ВР
                                                                                                                     DNA; 3880
                                                                                                                                                                                                                                                                                                                                                                        94GB-00003285
94GB-00015532
                                                                                                                                                                                                                                                                                                                                                  95WO-GB000356
                                                                                                                                                                                                                                                                                                                                                                                                        (WELL ) WELLCOME FOUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1995-302715/39.
P-PSDB; AAR82658.
                                                                                                                                                              (first
                                                                                                                   AAT03888 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity
Matches 1561; Conserv
                                                                                                                                                                                    gene.
                                                                                                                                                                                    mGluR4
                                                                                                                                                                                                                                         sapiens
                                                                                                                                                                                                                                                                                                                                                                        21-FEB-1994;
01-AUG-1994;
                                                                                                                                                                                                                                                                                                                                                  21-FEB-1995;
                                                                                                                                                                                                                                                                                                         WO9522609-A2
                                                                                                                                                               22-DEC-1995
                                                                                                                                                                                                                                                                                                                              24-AUG-1995
                                                                                                                                                                                                                                                                                                                                                                                                                             Makoff AJ;
                                                              2876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1253
                                         1722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      42
                                                                                                                                         AAT03888,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                   Human
                                                                                                                                                                                                                                         Ношо
                                                                                                RESULT 13
```

g

g

ઠે

셤 ò

ઠે

ö 101 1145

221

161

1265

281

1325

341

1385

401

1445

461

1505

521

1565

641

581

ò

```
1686 TGACATGCGGCCCACAGAGAACCGCACGAGCTGCCGGCCCATCCCCCATCATCAAGCTTGA 1745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human metabotropic glutamate receptor subtype 4 (hmGluR4) cDNA clones were isolated from a cerebellum cDNA library using a rat mGluR4 probe. Clone cmR20 lacked the 5' end of the hmGluR4 gene. PCR using human genomic or brain cDNA as template was used to obtain a complete gene sequence (given in AAQ89342) encoding hmGluR4 (AAR72092). Recombinant hmGluR4 was produced in mammalian cells. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                      CAGCCACGTCAAGAAGTGCACCACCATGAGCGAATTGGGCAGGATTCAGCTTATGAGCA
                                                                                                                                                                                                                                                                                                                   COGGGAACTGAGCTACGGCGGGCGCTCTTCTGTGCTACGCCACTACCTTCCT
                                                                                                                                                                                                                               TECCGAGTTCTGGGAGGACAACTTCCACTGCAAGCTGAGCCGCCCACGCCCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                                    CATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                           1326 TGGCACCCAGCTGCTTAAGTACATCCGAAACGTCAACTTCTCAGGCATCGCAGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1506 AATAGAGCGGATGCACTGGCCGGGAGCGGCAGCAGCTGCCCCCCTCCATCTGCAGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCCTGCCAGCCCGGGGAGCGAAAGACTGTGAAGGGCATGGCTTGCTGCTGCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGGGACTCGCCGTGCCGCTGCTCCTCTTCCTGGCCGTGGGCATCGCCGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTGTTCGTGGTCACGTTTGTGCGCTACAACGATACCCCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                     AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAGGCGCAACATCTGGTT
                                                                                                                                                                                 TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG
                                                                                                                                                                                                                                                           162 AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCACTCGGCCTATGAGCA
                                                                                                                                                                                                                                                                                                        GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCACGCCTGCACGC
                                                                                                                                                                                                                                                                                                                                                                                               TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                            TGTAACCTTCAATGAGAACGGAGGCGCACCGGGGCGCTACGACATCTACCAGTACCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATAGAGCGGATGCAGTGGCCAGGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGACATGCGGCCCACAGAGCACGCACGCGCCCAGCCCCATCCTCAAGTTGGA
                                                                                                                                              Gaps
                                                                                                                      Score 1468.2; DB 2; Length 2738;
Pred. No. 4.6e-307;
0; Mismatches 153; Indels 0;
                                                                                                  Sequence 2738 BP; 545 A; 887 C; 783 G; 523 T; 0 U; 0 Other;
                                                                                                                        Query Match
Best Local Similarity 91.1%;
Matches 1560; Conservative
                                                                                                                                                                                                                                                                                   1146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1806
                                                                                                                                                                     42
                                                                                                                                                                                                                  102
                                                                                                                                                                                                                                                                                                         222
                                                                                                                                                                                                                                                                                                                                1206
                                                                                                                                                                                                                                                                                                                                                      282
                                                                                                                                                                                                                                                                                                                                                                                                 342
                                                                                                                                                                                                                                                                                                                                                                                                                                             402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             882
 ¥888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                      g
                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                     ઠે
                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                         8
                                                                                                                                               2692
                                                                                                                                                                     1601
                                                                                                                                                                                                                 1661
                                                                                                                                                                                                                                       2812
                                                                                                                                                                                                                                                                                   2872
                                                                              1481
                                                                                                                                                                                            2752
                                                                                                                                                                                                                                                            TGGGGAAGCCAAATCAGAGCTGTGTGAAACCTGGAGACCCCAGCGCTGGCTACCAAACA 1721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            metabotropic glutamate receptor sub-type(s), esp. 4, 6 and 7 - also sp. DNA and antibodies, useful for identifying cpds. which modulate
                                                                                                                                                                                  CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACT
                                                                                               CACCATCTTCTTTGGCACCTCGCAGTCGGCCGACAAGCTGTACATCCAGACGACGACGCT
                                                                                                                           GACGGICTCCGIGAGICTGAGCGCTICAGIGICCCTGGGGAIGCTCIACAIGCCCAAAGI
                                                                                                                                      CTACATCATCCTCTCTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGC
                                                                                                                                                                                                                  CGTGGTCACCGCCCCCACCATGTCCAACAGTTCACACAGAAGGCCAACTTCAGGCCCAA
                                                                                                                                                                                                                               CGTCGTTACGGCGGCCACCATGTCCAAACATTCACGCAGAAGGGCAACTTCCGGCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           receptor subtype 4; mGluR4; hmGluR4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ĥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Knoepfel
                                                                                                                                                                                                                                                                                                          GACCTACGTCACCTACACCAACCATGCCATCTAG 1755
                                                                                                                                                                                                                                                                                                                       GACTTACGTCACTTACACCAACCATGCAATCTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Puettner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 17; Page 37-43; 110pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                        BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kuhn R, Lindauer K,
                                                                                                                                                                                                                                                                                                                                                                                        CDNA; 2738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         corresp. DNA and antibodies, signal transduction activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            glutamate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          94WO-EP002991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              93EP-00810663.
                                                                                                                                                                                                                                                                                                                                                                                                                                     (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1995-139596/18.
P-PSDB; AAR72092.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human metabotropic signal transducer;
                                                                                                                                                                                                                                                                                                                                                                                       AAQ89342 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GEIGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (CIBA ) CIBA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human mGluR4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          07-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-SEP-1993;
19-AUG-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO9508627-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                    25-MAR-2003
26-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ΡΊ,
                                                                                                                                                                                                                                                               1662
                                                                                                                                                                                                                                                                                     2813
                                   1362
                                                          2513
                                                                                1422
                                                                                                     2573
                                                                                                                           1482
                                                                                                                                                 2633
                                                                                                                                                                        1542
                                                                                                                                                                                             2693
                                                                                                                                                                                                                  1602
                                                                                                                                                                                                                                        2753
                                                                                                                                                                                                                                                                                                            1722
                                                                                                                                                                                                                                                                                                                                 2873
                                                                                                                                                                                                                                                                                                                                                                                                              AAQ89342;
              2453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Flor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ношо
                                                                                                                                                                                                                                                                                                                                                                   RESULT 14
AAQ89342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Key
                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                      à
                                                                                                                                              g
                                                                                                                                                                     ઠે
                                                                                                                                                                                        원
                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                 셤
                                                      셤
                                                                              δ
```

1685

761

701

1805

881

941

Otsuki T;

```
This invention relates to novel, isolated full length human cDNA molecules and the encoded proteins thereof. Specifically, it refers to condecules and the encoded proteins thereof. Specifically, it refers to condecules and standard, where nome of these clones are identical to any known human mRNAs. The present invention describes an immunoassay to identify agonists and antagonists, as well as antibodies, antisense molecules and siRNAs that can all be used to bind con antibodies, antisense molecules and siRNAs that can all be used to bind con ecules are useful for diagnostic markers or therapeutic targets for the various disease or morbid states. In particular, they are useful in gene therapy for treating osteoporosis, neurological disease, Alzheimer's disease, Parkinson's disease, dementia, short memory and various cancers, as well as for maintaining equilibrium of sense or motor function, and for treating emotional reaction, fear response and panic. Accordingly, cor they exhibit osteopathic, neuroprotective, noctropic, antiparkinsonian, cytostatic and tranquiliser activities. This polymuclectide is a full can be obtained on the form of the specification but can be obtained on the form of the form of the specification but can be obtained on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            102 TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGCCACGTCAAGAÀGTGCACCAACCGTGAGCGAATTGGGCAGGATTCAGCTTATGAGCA 759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             342 TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New 1995 cDNA, useful for treating osteoporosis, neurological diseases, Alzheimer's diseases, Parkinson's diseases, dementia and various cancers.
  osteopathic; neuroprotective; nootropic; antiparkinsonian; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAACAACAACATCTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       640 recceaerrerecadada de contra contra contra de contra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATGCACCGTGACCTGTGTCCCGGCCGCGTGGGCTCTGCCCGCGCATGGACCCTGTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCCATGGGCCACGCCTGCACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 13; Length 3470;
                                                                                                                                                                                                                                                                                                                                                                                                           T, Isono Y, Sugiyama T, Irie R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 3470 BP; 677 A; 1098 C; 935 G; 760 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   European Patent Office, Vienna Sub-office.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 1422.8; DB 13; Lengt
Pred. No. 3.1e-297;
0; Mismatches 152; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 1; SEQ ID NO 173; 2686pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                           Nishikawa 7
Nagai K, 1
                                                                                                                                                                                                                                                                                                                                                           (REAS-) RES ASSOC BIOTECHNOLOGY
                                                                                                                                                                                                                                                                              14-FEB-2003; 2003JP-00102207. 09-MAY-2003; 2003JP-00131452.
                                                                                                                                                                                                                              12-FEB-2004; 2004EP-00003145.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 81.1%;
Best Local Similarity 90.9%;
Matches 1514; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                           Isogai T, Yamamoto J,
Wakamatsu A, Ishii S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2004-583265/57.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                P-PSDB; ADR08623
                             tranquiliser.
                                                                            Homo sapiens.
                                                                                                                            EP1447413-A2
                                                                                                                                                                            18-AUG-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          820
  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                      1121
                                                                                                                                                                                                                                                                                                                                                           1181
                                                                                                                                                                                                                                                                                                                                                                                                              2165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2585
1866 CCGTGAACTGAGCTACGTGCTGCTGCAGCATCTTCCTGTGCTATGCCACCACCTTCCT 1925
                                                                                                                                                       1061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGC 1601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGTGGTCACCGCCGCCACCATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAA 1661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1662 TGGGGAAGCCAAATCAGAGCTGTGAGAACCTGGAGACCCCCAGCGCTGGCTACCAAACA 1721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2646 CGGAGAGGCCAAGTCTGAGCTCTGCGAGAACCTTGAGGCCCCAGCGCTGGCCACCAAACA 2705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene; 88; human; oligo-capping method; diagnostic marker; gene therapy; osteoporosis; neurological disease; Alzheimer's disease; Parkinson's disease; dementia; short memory; cancer; sense or motor function; emotional reaction; fear response; panic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Full length human cDNA useful for treating neurological disease Seq 173.
                                                                            CATGATCGCTGAGCCCGACCTTGGCACCTGCCTGCGCGCGAATCTTCCTGGGACTAGG
                                                                                                                                                                                    1986 GATGAGCATCAGCTATGCAGCCTCACCAAGACCAACCGCATCTACCGCATCTTCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2406 CCCCATCTTGCCACCTCGCAGTCGGCCGACAAGCTGTACATCCAGACGACGACGT
                                                                                                                                                    1002 CATGAGCATCAGCTACGCGGCCCTGCTGACCAAGACCAACGCCATTTACCGCATCTTGA
                                                                                                                                                                                                                                                         GCAGGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCCGGCCTCGCAGCTGGCCAT
                                                                                                                                                                                                                                                                                                                                                           CACCTTCATCCTCATCTCCCTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                             creccaercegregaerrecaggaecaggaeacaercegeecregerregeagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2226 rerecteadrereacareredeacererecerereregecreeredearecarecareca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2466 GACGGTCTCGGTGAGTCTCAGCGCCTTCGGTGTCCCTGGGAATGCTCTACATGCCCAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAAGCCTCAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATGATCGCAGAGCCGGACCTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGG
                                                                                                                                                                                                                                                                                         GCAGGGCAAGCGCTCGGTCAGTGCCCCACGCTTCATCAGCCCCGCCTCACAGCTGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                              GCTGATGGTCACGTGTACTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACCTACGTCACCTACACCAACCATGCCATCTA 1754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2706 GACTTACGTCACTTACACCAACCATGCAATCTA 2738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADR06667 standard; cDNA; 3470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                04-NOV-2004
                                                  942
                                                                                                    1926
                                                                                                                                                                                                                                                      1062
                                                                                                                                                                                                                                                                                                         2046
                                                                                                                                                                                                                                                                                                                                                                                                              2106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1602
                                                                                                                                                                                                                                                                                                                                                           1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADR06667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 15
                                                                                                    გ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                  ઠે
                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             名
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
```

ô

Gaps

ö

639

669 221 879

6 8 6 8 6 8 6 8 6 8 6 8 6 8 6 8

8 8

```
Db 1960 CCCCATCTTCTTTGGCACCTCGCAGTCGGCCGAAGCTGTACATCCAGACGACGACGACGCT 2019

Oy 1482 GACGGTCTCCGTGAGCGCTTCAGTGTCCCTGGGGAAGTTGCCCAAAGT 1541

Db 2020 GACGGTCTCCGTGAGCGCTTCAGTGTCCCTGGGAATGCTCTACATGCCCAAAGT 2079

Oy 1542 CTACATCATCCTTCCACCCGGAGCAGAAGCGCAAGCGCAAGCGCAAAGT 2079

Db 2080 CTACATCATCCTTCCACCCGGAGCAGAAGCGCAAGCGCAAGCGCAAGCGCAAAGC 2139

Oy 1602 CGTGGTCACCCCCCATGTCCAACAGTTCACACAGAGCGCAAGCGCAAAGCGCAAAGCGCAAAGCGCAAAGCGCAAAGCGCAAAGCGCAAAGCGCAAAGC 2139

Oy 1602 CGTGGTCACCCCCCATGTCCAACAGTTCACACAGAAGCGCAAAGCCCAAAGC 2139

Oy 1602 CGTGGTCACCCCATGTCCAACAAGTTCACACAGAAGGCCAAACTTCAGGCCCAA 1661

Db 2140 CGTCGTTACGGCGACCATGTCCAACAAGTTCACACAAAGGCAAACTTCGGCCCAA 2199

Oy 1662 TGGGGAAACCATGTCCAACAAGTTCACACAAAGGCCAAACTTCGGCCCAA 2199

Db 2200 CGGAAAGCCCAAATCAGAAACTTGAGAACCCCAGGG 2245
```

Search completed: June 21, 2005, 05:02:17 Job time: 999 secs

6 8 6 8 6 8 6 8 6 8 6 8

```
RESULT
LOCUS
DEFINIT
ACCESSION
VERSION
KEYWORD
SOURCE
ORGAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFEREN
AUTHC
                                                                  June 21, 2005, 01:57:35 ; Search time 7720 Seconds (without alignments) 11015.402 Million cell updates/sec
                                                                                                                 US-10-828-332-6
1755
1 atgccaggggtatcatcatc.....acaccaaccatgccatctag 1755
                                                                                                                                                                                                                           9416466
GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                  4708233 segs, 24227607955 residues
                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                             OM nucleic - nucleic search, using sw model
                                                                                                                                                                IDENTITY NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                               9b_htg.*
9b_htg.*
9b_om.: *
9b_ow.: *
9b_bt.: *
9b_pt.: *
9b_ro.*
9b_ro.*
                                                                                                                                                                                                                                                                                                                                   GenEmbl:*
                                                                                                                                                                                                                                                                                                                                                                                                5...
1010:
113::::
                                                                                                                 Title:
Perfect score:
Sequence:
                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                 Database:
                                                                                                                                                                                                   Searched:
                                                                      Run on:
```

	_;	
Pred. No. is the number of results predicted by chance to have a	score greater than or equal to the score of the result being printed	
to	pe;	ion
chance	result	and is derived by analysis of the total score distribution
ģ	the	G G
ted	oŧ	3COL
predic	BCore	cotal
ults	the	the
res	유	of
of.	gual	/BiB
umber	or	anal
Je n	han	ά
8 t)	er	ved
	reat	deri
ž	9	18
Pred	BCOLE	and

SUMMARIES

	Description	M90518 Rat metabot	AR381454 Sequence	M92077 Rat metabot	BC072635 Mus muscu	U47331 Rattus norv	AK122982 Homo sapi	AR208972 Sequence	AR208973 Sequence	U92457 Human metab	AK122836 Homo sapi	A46196 Sequence 3	AR270511 Sequence	AR381464 Sequence	AX548890 Sequence	AX658167 Sequence	X80818 H.sapiens m	A43637 Sequence 1	AX427263 Sequence	annoman ACRALTA
	ID	RATMGLUR4A	AR381454	RATMGLURBD	BC072635	RNU47331	AK122982	AR208972	AR208973	HSU92457	AK122836	A46196	AR270511	AR381464	AX548890	AX658167	HSMGLUR4	A43637	AX427263	AD149574
	DB	101	9	10	10	10	6	9	•	6	6	9	9	9	9	9	0	9	9	v
	Query Match Length DB	4488	2838	3704	4425	3868	3176	3431	3431	3431	3850	3884	3884	3884	3884	3884	3884	2738	2738	2736
æ	Query Match	97.6	97.3	97.3	88.9	86.4	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.7	83.7	83
	Score	1712.4	1707.6	1707.6	1560.4	1516.4	1470.8	1470.8	1470.8	1470.8	1470.8	1470.8	1470.8	1470.8	1470.8	1470.8	1470.8	1469.8	1469.8	1467.8
	Result No.	-	7	e	4	ß		7	60	6	10	11	12	13	14	15	16	17	18	9

CQ849704 Sequence AK126746 Homo sapi CQ853450 Sequence	AK131536 Homo sapi CQ730036 Sequence BC080284 Mus muscu	AC134369 Rattus no AB042755 Taeniopyg AR071655 Sequence		AR106169 Sequence AY673682 Mus muscu	U63288 Rattus norv AX418281 Sequence U17252 Mus musculu	AC127341 Mus muscu AY275542 Oryctolag	AR147650 Sequence AR147651 Sequence	AXS48898 Sequence AX658362 Sequence	U92459 Human metab D13963 Rattus norv
CQ849704 AK126746 CQ853450	AK131536 CQ730036 BC080284	AC134369 AB042755 AR071655	AR202435 AX548894 AR106168	AR106169 AY673682	RNU63288 AX418281 MMU17252	AC127341 AY275542 HSH05025	AR147650 AR147651	AX548898 AX658362	HSU92459 RATMGLUR6
ဖြစ်ဖ	901	9 20 10		10	10	0.4	900	ဖွ	62
	3590 2548 3002	22	2961	2635	2793 2830 2830	213609	3321 3321 3321	3321 3321	3321
81.1 81.1 76.4	76.4	523.3	50.2	49.0	48 48.7 7.8 5.0	48.48	47.8	8.8	7.8
8 8 7	<u>, , , , , , , , , , , , , , , , , , , </u>	in in in	N W 4	4 4	4 4 4	444	4 4	44	44
1422.8 1422.8 1340.6	1340.6 1331.2	935.8	880.6 871	860.2 859.8	855 851.8 851.8	843.8	839 839 839	839 839	833.2
20 21 22	24 23	27 27 27 27 27 27 27 27 27 27 27 27 27 2	30	33	3 3 4 6 5 4	38	404	42	44 45
		υ				ο.			

ALIGNMENTS

KESULT 1	
LOCUS	RATMGLUR4A 11near ROD 01-APR-1996
DEFINITION	tropic glutamate receptor (GLUR4) mRNA, co
ACCESSION	
VERSION	M90518:1 GI:205400
KEYWORDS	metabotropic glutamate receptor.
SOURCE	Rattus norvegicus (Norway rat)
ORGANISM	Rattus norvegicus
	Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
	Rattus.
REFERENCE	1 (bases 1 to 4488)
AUTHORS	O'Hara, P.J., Sheppard, P.O., Thogersen, H., Venezia, D.,
	Haldeman, B.A., McGrane, V., Houamed, K.M., Thomsen, C., Gilbert, T.L.
	and Mulvihill, E.R.
TITLE	The ligand-binding domain in metabotropic glutamate receptors is
	related to bacterial periplasmic binding proteins
JOURNAL	Neuron 11 (1), 41-52 (1993)
MEDLINE	93332699
PUBMED	.8338667
REFERENCE	2 (bases 1 to 4488)
AUTHORS	O'Hara, P.J.
TITLE	ission
JOURNAL	Submitted (01-APR-1992) Patrick J. O'Hara, ZymoGenetics, Inc.,
	WA 98105, USA
COMMENT	Original source text: Rattus norvegicus cDNA to mRNA.
FEATURES	Location/Qualifiers
source	14488
	/organism="Rattus norvegicus"
	/mol_type="mRNA"
	/db_xref="taxon:10116"
	/tissue_type="brain"
gene	14488
	/gene="GLUR4"
mRNA	1. 4488
	/gene="GLUR4"
CDS	8553593
	/gene="GLUR4"
	/note="putative"
	/codon_start=1
	<pre>/product="metabotropic glutamate receptor"</pre>

ORIGIN

셤

ò

셤

8

Ω

8

8

g

8 8 8

q ઠે 8 8

```
AR381454 2838 bp
Sequence 1 from patent US 6608176.
AR381454
                 2600
                                         822
                                                                 2660
                                                                                           882
                                                                                                                   2720
                                                                                                                                            942
                                                                                                                                                                      2780
                                                                                                                                                                                               1002
                                                                                                                                                                                                                         2840
                                                                                                                                                                                                                                                  1062
                                                                                                                                                                                                                                                                           2900
                                                                                                                                                                                                                                                                                                   1122
                                                                                                                                                                                                                                                                                                                            2960
                                                                                                                                                                                                                                                                                                                                                      1182
                                                                                                                                                                                                                                                                                                                                                                               3020
                                                                                                                                                                                                                                                                                                                                                                                                       1242
                                                                                                                                                                                                                                                                                                                                                                                                                                 3080
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 2
AR381454
LOCUS
DEFINITION
ACCESSION
                                                                                                                                                                                                                 g
                                                            В
                                                                                                           g
                                                                                                                                                              යි පි
                                                                                                                                                                                                                                              8 8 8
                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                            8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                8
                                                                                 õ
                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      원장
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         상 원
/procein_id="AAA93190.1"
/db_xref="G1:205401"
/db_xref="G1:205401"
/tranlation="MSGKGGMAWWARLPLCLLLSLYAPWVPSSLGKPKGHPHMNSIR
/tranlation="MSGKGGMAWWARLPLCLLLSLYAPWVPSSLGKPKGHPHMNSIR
IDG01TLGGLPPVHGKGSEGKACGELKKEKGIHRLEAMLFALDRINNDPDLLPNTTLG
ARIDTCSRDTHALEQSLTFYRALIERDGTFWRCGSGGPPIITKPERVVGTUGASGSS
VSIMVANILAREKKIPOISYASTAPDLSDNSKYDFFSRVVPSPTYQQAMVDIVALGETS
NARGIIIFANEDDIRRVLEAARRANGTGHFFWGSDSWGSKSAPVLRLEEVAEGAVTI
LPKRNSVGFPDR YFSSRTLDNNRNNIWFBEFREDNFFHCALSHRALKGSHIKKGTINRE
RIGQDSAYEGEKVOPVIDAYYAMGHALHAMHDLCFCRVGTQCPVONTRE
RIGQDSAYEGEKVOPVIDAYYAMGHALHAMHDLCFCRVGTQCPVONTRE
RIGQDSAYEGERGCFCPVOMRP
FGSRYGCPDR YFSSRTLANNANIWFBEFRANDPYDGTGLLKYI
RNVNFSGIAGNPYTFLMIAAPDLGTCSCHREPTCTGYQVQVDRYTCCTYONRP
FGSRYGCPDR FRYTYCTOFFTELAVVGIAATLFKTNRIYRIFE
GGKRSVSARRFISPSSALLAMTTLLSLGLGTCWFVVUDPSHSYNDTPIVKASGRE
LSYVLLAGIFLCYATTFLMIAAPDLGTCSLRRIFLGGMSISYAALLTKTNRIYRIFE
GGKRSVSARRFISPSSALLAMTTTLISLGLGTCWFVVUDPSHSYNDTPIVKASGRE
GGKRSVSARRFISPSACHATFLINIAAPDLGTCSLRRIFTGVPETFNEARPTCTIVW
LAPTPFFCTSDLSLICLLGSSMLLAMTTCTIVW
LAPTPFFCTSDSASANLLAMTTTTVSSLSARVSTATTTTVHAI"
RRSLKAVVTAATMSNKFTQKGNFRPNGEAKSELCENLETPALATKGTYTYTHAI"
                                                                                                                                                                                                                                                                                                                                        1939
                                                                                                                                                                                                                                                                                                                                                                                          1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2599
                                                                                                                                                                                                                                                                                                                                                                                                                                             2059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        341
                                                                                                                                                                                                                                                                                                                  101
                                                                                                                                                                                                                                                                                                                                                                   161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       281
                                                                                                                                                                                                                                                                                                                                                                                                                     221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GIGGGACTCGCCGIGGCCGIGCTGCCCCTCTTCCTGGCCGTGGTGGGCATCGCCGCCAC 821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGAGCCCTGCACCGGGTACCAGTACCAACTGGACCGCTACACCCTGTAAGACCTGCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATCCCCATCGTCGAAGTTGGA
                                                                                                                                                                                                                                                                                                                AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAACACGCGCAACATCTGGTT
                                                                                                                                                                                                                                                                                                                                AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAACAGGCGCAAACTTCTGGTT
                                                                                                                                                                                                                                                                                                                                                                   TGCCGAGTTCTGGGAGACAACTTCCATTGCAAGTTGAGCCGCCACGGGCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                  TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                 GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCACGCGGTGCACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCACGCCACGCCACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATGCACCGTGACCTGTGCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACCAGCACCTGCACCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCCTGCCAGCCGGGGAGCGAAAGAAGAAGACTGTGAAGGGCATGCTGCTGCTGCTGCTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCCTGCCAGCCCGGGGGAGCGAAAGAAGACTGTGAAAGGGCATGCCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGAGCCCTGCACCGGGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGACATGCGGCCCACAGAACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                     AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                DB 10; Length 4488;
                                                                                                                                                                                                                                                                                        .
0
                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                               Score 1712.4; DB 10.
Pred. No. 2.2e-273;
0; Mismatches 1;
                                                                                                                                                                                                                                                               97.6%;
                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 1713; Conserv
                                                                                                                                                                                                                                                                                                                                          1880
                                                                                                                                                                                                                                                                                                                                                                                           1940
                                                                                                                                                                                                                                                                                                                                                                                                                                             2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2300
                                                                                                                                                                                                                                                                                                                  42
                                                                                                                                                                                                                                                                                                                                                                   102
                                                                                                                                                                                                                                                                                                                                                                                                                     162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           762
```

ය යි

유 ઠે g ઠે g g

ò

ò

2779 2839 2899 1121 2959 3019 1241 3079 1301 3139 1361 3199 1541 3379 3439 1661 3499 2719 1001 1061 1181 1421 1481 1601 881 941 redegaagecaaarcagagererereagaaceregaagaceceagegeraceaaaca GCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGG CCGGGAGCTACGTGCTGCTGCTGCCGGCATCTTTCTGTGCTACGCCACTACCTTCCT CATGAGCATCAGCTACGCGGCCCTGCTGACCAAGACCCACCATTTACCGCATCTTTGA CTCCCACTCGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCCGGTTTGCCAGGGG cerecreastrecaterceascreterecretererererescresecracascresecr GCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAA CGAGGCCAAGCCCATCGGCTTCACCATGTACACCACCTGCATTGTCTGGGCTGGCCTTCAT CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGC CTACATCATCCTCTTCCACCCGGAGCAGCAGCCCCAAGCGCAAGCGCAGTCTCAAAGC TGGGGAAGCCAAATCAGAGCTGTGTGAGAACCTGGAGACCCCCAGCGCTGGCTACAAACA CCGGGAACTGAGCTACGTGCTGGCGGGGCATCTTTCTGTGCTACGCCACTACGTTCCT GCAGGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCAT GCAGGGCAAACGGTCGGTCGGTCGGCGTTTCATCAGCCCCGGCCTCGCAGCTGGCCAT CACCTTCATCCTCATCTCCCTGCAGCTGCTCGCGATCTGCGTGTGGTTCGTGGACCC CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCCAGACAACCTCT CCCCATCTTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACT GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGT GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGT CATGATCGCAGAGCCGGACCTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGG CATGAGCATCAGCTACGCGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGA CGTGCTCAAGTGCGACATCTCGGACCTGTCCCTCATCTGCCTGGGGCTACAGCATGCT GCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGGAGGCGTGCCCGAGACCTTCAA GCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCA GACCTACGTCACCACCACCATGCCATCTAG 1755

PAT 18-DEC-2003

linear

DNA

Wed

```
1249
                                                                                                                                                                                                              1369
                                                                                                                                                                                                                                                      1429
                                                                                                                                                                                                                                                                                                1489
                                                                                                                                                                                                                                                                                                                                                                                   1609
                                        1129
                                                             1001
                                                                                                       1001
                                                                                                                                                                                         1181
                                                                                                                                                                                                                                    1241
                                                                                                                                                                                                                                                                           1301
                                                                                                                                                                                                                                                                                                                     1361
                                                                                                                                                                                                                                                                                                                                                               1421
                                                                                                                                                                                                                                                                                                                                                                                                       1481
                                                                                                                                                                                                                                                                                                                                                                                                                            1669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1661
 GCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCCATCGTCAAGGCCTCGGG 1069
                                                                                                                                                1121
                                                                                                                                                                                                                                                                                                                               1490 GCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAA 1549
                                                                                                                                                                                                                                                                                                                                                                                                                                                  1541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTACATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGC 1789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ROD 27-APR-1993
transcript.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RATMGLURBD 3704 bp mRNA linear ROD 27-APR-199 MRNA the metabotropic glutamate receptor 4 mRNA, primary transcript. M92077. I GI:205403
Glutamate receptor; metabotropic glutamate receptor. Rattus norvegicus (Norway rat)
Rattus norvegicus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                         CATGATCGCAGAGCCGACCTGGGGACTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGG
                                                                                                                                                                                         CTCCCACTGGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCCGCTTTGCCAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCAGGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCTT
                                                                                                                                                                                                                                                                           CGTGCTCAAGTGCGACATCTCGGACCTGTCCCTCATCTGCTGGGGCTACAGCATGCT
                                                                                                                                                                                                                                                                                        CATGAGCATCAGCTACGCGGCCCTGACCAAGACCAACGCCATTTACCGCATCTTTGA
                                                                                                                                                                     GCAGGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCAT
                                                                                                                                                                                                                                    CTCCCACTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGG
                                                                                                                                                                                                                                                                                                                      GCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACCTACGTCACCTACACCAACCATGCCATCTAG 1755
  1010
                                                             942
                                                                                  1130
                                                                                                       1002
                                                                                                                           1190
                                                                                                                                                 1062
                                                                                                                                                                      1250
                                                                                                                                                                                           1122
                                                                                                                                                                                                              1310
                                                                                                                                                                                                                                    1182
                                                                                                                                                                                                                                                       1370
                                                                                                                                                                                                                                                                                                1430
                                                                                                                                                                                                                                                                                                                                                                                    1550
                                                                                                                                                                                                                                                                                                                                                                                                                              1610
                                                                                                                                                                                                                                                                                                                                                                                                                                                  1482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1722
                                         1070
                                                                                                                                                                                                                                                                             1242
                                                                                                                                                                                                                                                                                                                      1302
                                                                                                                                                                                                                                                                                                                                                               1362
                                                                                                                                                                                                                                                                                                                                                                                                         1422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1542
                      882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 3
LACTUS
LOCUS
DEFINITION
ACCESSION
VERSION
VERSION
CEYWORDS
SOURCE
ORGANISM
                  ઠે
                                    යි දි
                                                                              요
                                                                                                     ઠે
                                                                                                                      요
                                                                                                                                          ઠ
                                                                                                                                                                 셤
                                                                                                                                                                                         ò
                                                                                                                                                                                                         g
                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                         요
                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                349
                                                                                                                                                                                                                       289
                                                                                                                                                                                                                                             161
                                                                                                                                                                                                                                                                                                                                                                         341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              881
                                                                                                                                                                                                     101
                                                                                                                                                                                                                                                                                      221
                                                                                                                                                                                                                                                                                                           409
                                                                                                                                                                                                                                                                                                                                 281
                                                                                                                                                                                                                                                                                                                                                     469
                                                                                                                                                                                                                                                                                                                                                                                              529
                                                                                                                                                                                                                                                                                                                                                                                                                   401
                                                                                                                                                                                                                                                                                                                                                                                                                                        589
                                                                                                                                                                                                                                                                                                                                                                                                                                                            461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                949
                                                                                                                                                                                                                                                         290 TGCCGAGTTCTGGGGAGACAACTTCCATTGCAAGTTGAGCCGCCCACGCGCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                230 AGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAGGCGCAACATCTGGTT
                                                                                                                                                                                                                                             TGCCGAGTTCTGGGAGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                  TGTAACCTTCAATGAGAACGGACGCACCGGGCGCTACGACATCTACCAGTACCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                     AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAGGCGCAACATCTGGTT
                                                                                                                                                                                                                                                                                       AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                                                                                                                                                                                                                                                                                                                          CATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                   TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                TGGCACCCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AATAGAGGGGATGCAGTGGCCAGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATAGAGCGGATGCAGTGGCCAGGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGGGACTCGCCGTGGCCGTGCCCCCTCTTCCTGGCCGTGGTGGGCATCGCCGCCAC
                                                                                                                                                                                 Gaps
                                                                                                                                                           2838;
                                                                                                                                                                                ö
                                                                        taste
            Unknown.
SM Unknown.
(CE 1 (bases 1 to 2838)
JRS Chaudhari,N. and Roper,S.D.
SE Taste receptor for umami (monosodium glutamate) tas
ANAL Patent:.US 6608176-A 1 19-AUG-2003;
Location/Qualifiers
1. .2838
'``rganism="unknown"
"'anomic DNA"
                                                                                                                                                            Length
                                                                                                                                                                                4; Indels
                                                                                                                                                            ;
                                                                                                                                                          Score 1707.6; DB 6
Pred. No. 1.5e-272;
0; Mismatches 4;
 GI:40089512
                                                                                                                                                           97.3%;
                                                                                                                                                           Query Match
Best Local Similarity 99.8
Matches 1710; Conservative
 AR381454.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                590
                                                                                                                                                                                                     42
                                                                                                                                                                                                                                             102
                                                                                                                                                                                                                                                                                      162
                                                                                                                                                                                                                                                                                                           350
                                                                                                                                                                                                                                                                                                                                 222
                                                                                                                                                                                                                                                                                                                                                      410
                                                                                                                                                                                                                                                                                                                                                                         282
                                                                                                                                                                                                                                                                                                                                                                                              470
                                                                                                                                                                                                                                                                                                                                                                                                                    342
                                                                                                                                                                                                                                                                                                                                                                                                                                                             402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              822
                                                                                                        source
                              ORGANISM
                                                 REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
VERSION
KEYWORDS
SOURCE
                                                                                                                                      ORIGIN
```

g ઠે a g ઠે 요 ઠે g ò **ઇ** ይ

ઠે

중 음 a ઠે 유

8 6

8

8 S g Š 엄 ò

```
BC072635 4425 bp mRNA linear
Mus musculus cDNA clone IMAGE:6850174, partial cds.
BC072635
                                                                                                        1002
                                                                                                                                    1062
                                                                                                                                                                1122
                                                                                                                                                                                                         2235
                                                                                                                                                                                                                                                                 2355
                                                                                                                                                                                                                                                                                                                        2475
                                                                                                                                                                                                                                                                                                                                      1482
                                                                                                                                                                                                                                                                                                                                                                  1542
                                                                                                                                                                                                                                                                                                                                                                                                                         1662
        1815
                     822
                                   1875
                                                 882
                                                               1935
                                                                             942
                                                                                           1995
                                                                                                                     2055
                                                                                                                                                  2115
                                                                                                                                                                              2175
                                                                                                                                                                                            1182
                                                                                                                                                                                                                                                   1302
                                                                                                                                                                                                                                                                               1362
                                                                                                                                                                                                                                                                                            2415
                                                                                                                                                                                                                                                                                                          1422
                                                                                                                                                                                                                                                                                                                                                    2535
                                                                                                                                                                                                                                                                                                                                                                                2595
                                                                                                                                                                                                                                                                                                                                                                                              1602
                                                                                                                                                                                                                                                                                                                                                                                                           2655
                                                                                                                                                                                                                                                                                                                                                                                                                                                     1722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 4
BC072635
LOCUS
DEFINITION
                                                          g
                                                                                      중 음
                                                                                                                  g
                                                                                                                                             6 B
                                                                                                                                                                         g
G
                                                                                                                                                                                                     g
                                                                                                                                                                                                                                  8 8
                                                                                                                                                                                                                                                            QQ
                                                                                                                                                                                                                                                                                        8 & 8
        8 8
                               g
                                                                            ઠે
                                                                                                                                  ઠે
                                                                                                                                                                                          8
                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                          ठ
                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                               음 장
                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                     원
                                            ે
                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1814
                                                                                                                                                                                    1154
                                                                                                                                                                                                                1214
                                                                                                                                                                                                                                            1274
                                                                                                                                                                                                                                                                        1334
                                                                                                                                                                                                                                                                                                    1394
                                                                                                                                                                                                                                                                                                                               1454
                                                                                                                                                                                                                                                                                                                                                          1514
                                                                                                                                                                                                                                                                                                                                                                                       1574
                                                                                                                                                                                                                                                                                                                                                                                                                   1634
                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                      341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   101
                                                                                                                                                                                                   161
                                                                                                                                                                                                                                                          281
                                                                                                                                                                                                                                                                                                                  401
                                                                                                                                                                                                                                                                                                                                                                                                     581
                                                                                                                                                                                                                                                                                                                                                                                                                                 641
                                                                                                                                                                                                                                                                                                                                                                                                                                                             701
                                                                                                                                                                                                                               221
                                                                                                                                                                                                                                                                                                                                             461
                                                                                                                                                                                                                                                                                                                                                                         521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATGCACCGTGACCTGTGTCCCGGCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                                                                                                                                                                                                        (strain Sprague-Dawley)
                                                                                                                                                                      AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAGCGCAACATCTGGTT
                                                                                                                                                                               AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAACAGGGGGCAACATTCTGGTT
                                                                                                                                                                                                   TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCCACGGGCTCAAGAAGGG
                                                                                                                                                                                                                                                           GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGC
                                                                                                                                                                                                                                                                                                                                            TGTAACCTTCAATGAGAACGGAGACGCACCGGGGCGCTACGACATCTACCAGTACCAACT
                                                                                                                                                                                                                                                                                                                                                     TGTAACCTTCAATGAGAACGGAGGCCCACCAGGCCCTACGACATCTACCAGTACCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCCTGCCGGCCGGGGGGGGGAAGAGAGAGTGTGAAGGGCATGCCTGCTGCTGCTCGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTA
                                                                                                                                                         0; Gaps
  Murinae
                     ŝ
                                                                                                                                         Score 1707.6; DB 10; Length 3704;
Pred. No. 1.4e-272;
0; Mismatches 4; Indels 0;
                      Nakanishi
 Eutheria; Rodentia; Sciurognathi; Muridae;
Mammalia; Eutheria; Rodentia; Sciurognathi; Murr
Rattus.
1 (bases 1 to 3704)
Tanabe,Y., Masu,M., Ishii,T., Shigemoto,R. and 1
A family of metabotropic glutamate receptors
Neuron 8 (1), 169-179 (1992)
13010002
                                                    al source text: Rattus norvegicus cDNA to mRNA.
Location/Qualifiers
1. 3704
/organism="Rattus norvegicus"
/mol_type="mRNA"
/strain="Sprague-Dawley"
/db_xref="taxon:10116"
/db_xref="taxon:10116"
/db_stage="adult"
/to. 7805
                                                         norvegicus
                                                                                                                                           Query Match 97.3%;
Best Local Similarity 99.8%;
Matches 1710; Conservative
                                                       Original sou
adult cDNA t
                                                                                                                  prim_transcript
ORIGIN
                                                                                                                                                                                     1095
                                                                                                                                                                                                                 1155
                                                                                                                                                                                                                                            1215
                                                                                                                                                                                                                                                                        1275
                                                                                                                                                                                                                                                                                                    1335
                                                                                                                                                                                                                                                                                                                                                                                       1515
                                                                                                                                                                                                                                                                                                                                                                                                                   1575
                                                                                                                                                                                                                                                                                                                                                                                                                                               1635
                                                                                                                                                                        42
                                                                                                                                                                                                   102
                                                                                                                                                                                                                               162
                                                                                                                                                                                                                                                           222
                                                                                                                                                                                                                                                                                      282
                                                                                                                                                                                                                                                                                                                  342
                                                                                                                                                                                                                                                                                                                                1395
                                                                                                                                                                                                                                                                                                                                             402
                                                                                                                                                                                                                                                                                                                                                           1455
                                                                                                                                                                                                                                                                                                                                                                         462
                                                                                                                                                                                                                                                                                                                                                                                                     522
                                                                                                                                                                                                                                                                                                                                                                                                                                  582
                                                                                                                                                                                                                                                                                                                                                                                                                                                             642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    762
              REFERENCE
AUTHORS
TITLE
JOURNAL
MEDLINE
PUBMED
                                                                      FEATURES
                                                        COMMENT
                                                                                                                                                                                     셤
                                                                                                                                                                                                  ò
                                                                                                                                                                                                             셤
                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                  8 B 8
                                                                                                                                                                                                                                                                                                                           8 B
                                                                                                                                                                                                                                                                                                                                                       중 음
                                                                                                                                                                                                                                                                                                                                                                                    요 상
                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                            임
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      요
                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
```

```
1874
                                                                                                                                                                           2114
                                                                                                                                                                                                                 2174
                                                                                                                                                                                                                                       1181
                                                                                                                                                                                                                                                           2234
                                                                                                                                                                                                                                                                                1241
                                                                                                                                                                                                                                                                                                                                                                1361
                                                                                                                                                                                                                                                                                                                                                                                    2414
                                                                                                                                                                                                                                                                                                                                                                                                                           2474
                                                                                                                                                                                                                                                                                                                                                                                                                                               1481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2774
                                                                                          1994
                                                                                                               1001
                                                                                                                                                      1061
                                                                                                                                                                                              1121
                                                                                                                                                                                                                                                                                                  2294
                                                                                                                                                                                                                                                                                                                        1301
                                                                                                                                                                                                                                                                                                                                           2354
                                                                                                                                                                                                                                                                                                                                                                                                        1421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2594
                                                 1934
                                                                       941
GCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCCATCGTCAAGGCCTCGGG
                                                                    CATGATCGCAGAGCCGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGG
                                                                                                                                                                                              CGTGGTCACCGCCCCCCCCCCCCCCCCCCCCCACACTCACACGCCACCTTCAGGCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CACCTTCATCCTCATCTCCCTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGACCC
                                                                                                                                                                                                                                                    CACCTICATCCTCATCTCCCTGCAGCTGCTCGGCATCTGCGTGGTTCGTGGTGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                               CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACATTTTTTGGCACACTCTTTTTTGGCACCTCACAGCCGACAAGCTGTACATCCAGACAACAACACACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGTGGTCACCGCCGCCACCATGTCCAACAAGTTCACACAAAAGGGCAACTTCAGGCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGGGAAGCCAAATCAGAGCTGTGTGAGAACCTGGAGACCCCCAGCGCTGGCTACCAAACA
                              CATGAGCATCAGCTACGCGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGA
                                                                                                                                                                   CATGAGCATCAGCTACGCGGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                        GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGT
```

ROD 25-JUN-2004

```
1771 AGGGTTTGACCGATACTTCTCCAGCCGCACGCTTGACAACAACAAGGCGCAACATCTGGTT 1830
                                                                                             1831
                                                                                                                                     162
                                                                                                                                                                                     1891
                                                                                                                                                                                                                                                                                                                        282
                                                                                                                                                                                                                                                                                                                                                                      2011
                                                                                                                                                                                                                                                                                                                                                                                                                   342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2731
                                                                                                                                                                                                                                222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1062
                                               102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1122
                                   ઠે
                                                                              g
                                                                                                                     ò
                                                                                                                                                                         g
                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   중 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                 Straubberg, E., Feingold, E.A., Grouse, L.H., Derge, J.G.,
Rlausner, R.D., Collins, F.S., Wagner, L., Schemen, C.M., Schuler, G.D.,
Altschul, S.F., Zoederg, B., Buercow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Moore, T., Wax, S. I., Wang, J., Haieh, F.,
Diatchenko, L., Marusina, K., Famer, A.A., Rubin, G.M., Hong, L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,
McKerran, K.J., Malek, J.A., Gunzatne, P.H., Richards, S.W.,
Villalon, D.K., Marwy, D.M., Sodergra, E.J., Lu, X., Gibbs, R.A.,
Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,
Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,
Butterfield, Y.S., Krzywinski, M., Touchman, J.W., Green, E.D.,
Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,
Generation and initial analysis of more than 15,000 full-length
human and mouse cDNA sequences
12477332 | 12477332 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 | 126733 |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Series: Plate: Row: Column: 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Thomas L. Casavant.

Web site: http://genome.ulowa.edu
Contact: bento-soares@ulowa.edu; tom-casavant@ulowa.edu
Bonaldo,Mr., Akabogu,I., Bair,T., Bair,J., Crouch,K., Davis,A.,
Fishler,K., Keppel,C., Kucaba,T., Lebeck,M., Melo,A., Schaefer,K.,
Casavant,T., Smith,C., Snir,B., Tack,D., Trout,K., Walters,J.,
Casavant,T., Soares,M.B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ľ.
                                                                                             Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission
Submitted (03-UTN-2004) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
Email: cgapbs-rémail.nih.gov
Tissue Procurement: Dr. Jim Lin, University of Iowa
CDNA Library Preparation: M. Bento Soares, University of Iowa
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: University of Iowa, Dr. M. Bento Soares and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAGCGCAACATCTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="mRNA"
/mol_type="mRNA"
/strain="C57BL/6"
/db_xref="tsxn:1000"
/clone="IMAGE:6850174"
/tissue_type="Brain, mouse, 13.5,14.5,16.5,17.5 (
/clone_lib="NIH BMAP_FYO"
/lab host="D410g"
/note="Vector: pYX-ASC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 10; Length 4425;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            88.9%; Score 1560.4; DB 10
larity 94.4%; Pred. No. 2.9e-248;
Conservative 0; Mismatches 96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .4425
/organism="Mus musculus"
                                                                                        Eukaryota, Metazoa, Chordata,
Mammalla, Eutheria, Rodentia,
1 (bases 1 to 4425)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                               musculus (house mouse)
  GI:49257159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 4425)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               trausberg, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
    BC072635.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 1618;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         42
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PUBMED
REFERENCE
AUTHORS
                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REMARK
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
```

2130 2310 2370 2430 2490 2610 2670 2790 2910 2010 2550 1061 1121 1181 2131 GGTGACCTTCAACGAGAACGGAGACGCCCAGGGCGTTATGACATCTACCAGTACCAACG 2190 281 341 461 521 641 701 821 881 941 401 761 TGCTGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG 2071 TGGCACCCAGCTGCTTAAGTACATCAGAAACGTCAACTTCTCAGGCATCGCCGGGAACCC 1951 GGAGGGGAAGGTGCAGTTTGTGTCGACGCCGTGTACGCCCATGCCCATGCTCTCCCCC carecarcereaccrereceeececeraeeacrerecereeaareeaccrereea AATAGAGCGGATGCAGTGGCCAGGGAGTGGCCAGCAGCTGCCACGCTCTGCAGCCT AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGCCAGGACTCGGCCTATGAGCA GCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGG 2551 ecrerriceregregrearririerececracaaceacacrecearcereaaeeereceee cargarcecagaecergaecrogegaecererreaereceeeceeearerreeeeeerree GGAGGGGAAGGTGCAGTTCGTCATTGACGCTGTATCGCCCATGGGCCACGCCTGCACGC CATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA TGTAACCTTCAATGAGAAACGGAGAGGCGCACCGGGGCGCTACGACATCTACCAGTACCAACT GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAG AATAGAGCGGATGCAGTGGCCAGGGAGTGGCCAGCAGCTGCCGCGCGCTCCATCTGCAGTCT GCCCTGCCAGCCCGGGGAGCGAAAGAAGAACTGTGAAGGGCATGGCTTGCTGCTGCTGCTCTTG CGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTA CGAGCCCTGCACGGGGGTACCAGTACAGGTGGACCGCTACACCTGTAAGACCTGCCCCTA CGACATGCGGCCCACAGAGAACCGCACGAGGTGCCAGCCCATCCCCATCGTCAAGTTGGA 2431 TGACATGCGGCCCACGGAGAACCGCACGAGCTGCCAGCCCATACCCATTGTCAAGTTGGA Greedacticecceredeccerectecceretrectesceredecareeceac 2611 ccesesacricacracercerecrecesescarerricrescrareceaceacerreer TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC CCGCGAACTGAGCTACGTGCTGCTGGCGGCATCTTTCTGTGCTACGCCACTACCTTCCT CATGATCGCAGAGCCGGACCTGGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGG CATGAGCATCAGCTACGCGGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGA GCAGGCCAAACGGTCGGTCACTGCCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCATT 2791 GCAGGGCAAGCGGTCGGTCAGCGCCCCACGGTTCATCAGCCCCGGCCTCGCAGCTGGCCAT CACCTTCATCCTCATCTCCCTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTGGACCC 2851 셤

ದ್ದ

6 6 6

යු ઠે ያ ያ

```
ARIIDFCSRDTHALEQSLTFVRALIEKDGTEVRCGSGGPPIITKPERVVGVIGASGSS
VSINVANIIRLFKTPQISYASTAPDISDNSRYDFFSRVVESDTYQAQAMVDIVRALKW
NYOSTLASEGSYGBGGVEAFIQKSRENGGVCIAQSVKI PREPKTGEPKI IKRLLETS
NARGIIIPRALESESYAGARFUKSRENGGVCIAQSVKI PREPKTGEPKI IKRLLETS
NARGIIIPRALEDIRRVLEAARRANGTGHFWMGSDSWGSKGAPVLALEEVAGAVTI
LPKRMSVRGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHIKKCTNRE
RIGQDSAYEQGGRVOPVIDAYYAMGHALLHARHBOLCFROWGFWFMDPVDGTQLLKYI
RNNYRSGIAGNPYTFNENGAPAGHALHARHBOLCFROWGFWFWDPVGTQLLKYI
RNNYRSGIAGNPYTFNENGAPAGHALHARHBOLCFROWTGSAPILKKTNRTHERMOW
PGSGQQLPRSICSIPCOPPERAKTVKGMACCWHCEPCTGYQYQVDRYTCKTCPYDMRP
TENRTSCQFIPIVKLEMDSPWAVLPLFLAVWOIAATHEVVYTFVRYNDYPIYKASGRE
LSYVLLAGIFLCYATTFLMIAAEPDLGTCSLRRIFLEUVYTFVRYNDYPIYKASGRE
LSYVLLAGIFLCYATTFLMIAAEPDLGTCSLRRIFLEUVYTFVRYNDYPIYTCIVW
LAGIILCLGYSGMLLMYTCTVYRYNDYRIKTRQVPRYNDYPIYTCIVW
LAFIPIPFGTSQSADKLYTUTUSVSLSASVSLGMLYMPKVYIILFIPPFCSWP
SPATKKKOMSGABALITSSVPPRSHFLARFBLGFIHQLFHHYNKEKKKGGGGE
SPPTKKKKQKILLSVPRRSASSWWPVCPGLQPARPPRENTALPANDT

        762
        GTGGGACTCGCCGTGGCCCTCTTCCTGGCCGTGGTGGCATCGCCGCAC
        821

        2600
        GTGGGACTCGCCGTGGCCGTGTTCCTTCCTGGCCGTGGTGGGCATCGCCGCCAC
        2659

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCCCTGCCAGCCCGGGGGGGGGAAAGAAGAAGACTGTGAAGGCGTTGCTGCTGCTGCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2480 CGAGCCCTGCACCAGGTACCAAGTGGACCGCTACACACTGTAAGACCTGCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2540 CGACATGCGGCCCACAGAGAACCGCACGACGACCATCCCCATCGTCAAGTTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAACAGCGCGCAACATCTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1940 TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCCACGCGCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCACGCGCTGCACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2120 CATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2180 TGGCACCCAGCTGCTTAAGTACATCAGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2360 AATAGAGCGGATGCAGTGGCCAGGAGTGGCCAGCAGCTGCCGCTCCATCTGCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGACATGCGGCCCACAGAACCGCACGAGCTGCCACCCATCCCCATCGTCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGCCGAGTTCTGGGAGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  162 AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTGCCATGGACCCCGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGTAACCTTCAATGAGAACGGAGACGCACCGGGGCGCTACGACATCTACCAGTACCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              522 AATAGAGCGGATGCAGTGGCCAGGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                              AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAGGCGCAACATCTGGTT
                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                  Length 3868;
                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                86.4%; Score 1516.4; DB 10; Lengt
llarity 99.9%; Pred. No. 5.6e-241;
Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                               EFSAWVFGDGL'
                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 1517; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              702
                                                                                                                                                                                                                                                                                                                                                                                                                                  42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       462
                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ⋩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                  1481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /translation="MSGKGGWAWWWARLPLCLLLSLYAPWVPSSLGKPKGHPHMNSIR
IDGDITLGGLFPVHGRGSEGKACGELKKEKGIHRLEAMLFALDRINNDPDLLPNITLG
                                                                                                                                                                                                                      3090
                                                                                                                                                                                                                                                                                               3150
                                                                                                                                                                                                                                                                                                                                                                          3210
                                                                                                                                                                                                                                                                                                                                                                                                                1541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGGGGAAGCCAAATCAGAGCTGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACA 1721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3391 TGGGGAAGCCAAGTCAGAGCTGTGAGAACCTGGAGGCCCCAGCACTGGCCACAAACA 3450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          p mRNA linear ROD 16-OCT-2002 glutamate receptor 4b mRNA, complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae,
                                                 2971 IGEGCTCAAGTGTGACATCTCGGACCTGTCGCGCTCATCTGCCTCCTGGGCTACAGCATGCT
                                                                                                                                                                                  GCTGATGGTCACGTGTACTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAA
                                                                                                                                                                                                      CCCCARCITITITIGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACT
                                                                                                                                                                                                                                                                                                                                                                        ccccarcitititiggcaccicgcagicggcigacaagcigiacaiccagacaaccacac
                                                                                                                                                                                                                                                                                                                                                                                                            GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGGATGCTCTACATGCCCGAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                    GACGGTCTCTGTGAGGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCCAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTACATCATCCTTCCACCCGGAGCAGAACGTGCCCAAGGCGCAAGCGCAGTCTCAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGTGGTCACCGCCCACCATGTCCCAACAAGTTCACACAGAAGGGCCAAACTTCAGGCCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                O'Hara, P.J.
Direct Submission
Submitted (26-JAN-1996) Patrick J. O'Hara, ZymoGenetics, 1201
Eastlake Avenue East, Seattle, WA 98102, USA
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /codon_gtart=1
product="metabotropic glutamate."
/protein_id="AAA88788.1"
/db_xref="G1:1197726"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3451 GACCTACGTCACTTACACCAACCATGTAG 3484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACCTACGTCACCTACACCAACCATGCCATCTAG 1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .3868
/organism="Rattus norvegicus"
/mol_type="mRNA"
/db_xref="taxon:10116"
855. .3806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3868 bp
Rattus norvegicus metabotropic g
cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rattus norvegicus (Norway rat)
Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              355. .3806
/note="mGluR4b"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   U47331.1 GI:1197725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rattus.
1 (bases 1 to 3868)
                                                                                                                                                                                  1302
                                                                                                                                                                                                                       3031
                                                                                                                                                                                                                                                                                               3091
                                                                                                                                                                                                                                                                                                                                    1422
                                                                                                                                                                                                                                                                                                                                                                          3151
                                                                                                                                                                                                                                                                                                                                                                                                                1482
                                                                                                                                                                                                                                                                                                                                                                                                                                                     3211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1722
                                                                   2911
                                                                                                         1242
                                                                                                                                                                                                                                                             1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 5
RNU47331
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDS
```

1939

ö 101

셤

g ò g

ò

셤

8

ઠે

쉽

ò

1999

161

2059

221

2119

281

2179

341

2239

401

2299

521

461

2479

641

2539

761

701

2419

g ሯ 엄 ઠે 임 ò 셤 ò 셤 ઠે 요

ઠે

```
S 100 Mean to 3176)
S 180 Mean to 3176)
S 180 Mean to 3176)
S 180 Mean to 3176)
Direct Submission
Submitted (15-UTU-2003) Takao Isogai, FLJ Project (HRI Team); 2-6-7
Kazusa-Kamatari, Kisarazu, Chiba 292-0818, Japan
(E-mali Jaconomicosphri. oc. jp, Tel:18-1438-52-3975, Fax:81-438-52-3986)
NEDO human cDNA sequencing project supported by Ministry of Economy, Trade and Industry of Japan; cDNA full insert sequencing:
Research Association for Biotechnology (RAB); CDNA ilbrary construction: Helix Research Institute (HRI) (supported by Japan Key Technology Center etc.); 5- & 3'-end one pass sequencing: RAB; Annotation; clone selection for full insert sequencing: HRI and RAB; annotation: HRI and RAB.
RAB; annotation: HRI and RAB.
Location(Qualifiers)
Sugawara, M., Takahashi, M., Kanda, K., Yokoi, T., Furuya, T.,
Kikkawa, E., Cmura, Y., Abe, K., Kamihara, K., Katsuta, N., Sato, K.,
Tanikawa, M., Yamazaki, M., Ninomiya, K., Tshibashi, T., Yamashita, H.,
Murakawa, K., Fujimori, K., Tanai, H., Kimata, M., Watanabe, M.,
Hiraoka, S., Chiba, Y., Ishida, S., Ono, Y., Takiguchi, S., Watanabe, S.,
Yosaida, M., Hottua, T., Kusano, J., Kanehori, K., Takahashi-Pujii, A.,
Hara, H., Tanase, T., Nomura, Y., Togiya, S., Komai, F., Hara, R.,
Sasaki, N., Arita, M., Imose, N., Musashino, K., Yuuki, H., Oshima, A.,
Sasaki, N., Arita, M., Imose, N., Musashino, K., Yuuki, H., Oshima, A.,
Shiohata, N., Sano, S., Moriya, S., Momiyama, H., Ichihara, T.,
Shiohata, Y., Shulatu, F., Wakebe, H., Hishigaki, H., Watanabe, T.,
Sugiyama, A., Takemcto, M., Kawakami, B., Yamazaki, M., Watanabe, K.,
Kumagai, A., Itakura, S., Fuliwara, T., Ono, T., Yamada, K., Fuliwara, T., Ono, T., Yamada, K., Fuliwara, T., Ono, T., Yamada, K.,
Inagaki, H., Ikema, Y., Okamoto, S., Okitani, R., Kawakami, T.,
Nakailma, Y., Mitano, M., Molanabe, M., Sasaki, M., Togashi, T.,
Nakailma, Y., Shingta, K., Senba, T., Mataumura, K.,
Nakaik, Yamatanabe, M., Komatsu, T., Mizushima-Sugano, J.,
Satoh, T., Shitati, Y., Takahashi, Y., Nakagawa, K., Okumura, K.,
Nakai, K., Yada, T., Nakamura, Y., Ohara, O., Isogai, T. and Sugano, S.
Complete sequencing and characterization of 21,243 full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tanigami, A., Fujiwara, T., Shibahara, T., Goto, Y., Hirao, M., Shimizu, F., Wakebe, H., Ono, T., Hishigaki, H., Watanabe, T., Ozaki, K., Sugiyama, T., Irie, R., Otsuki, T., Sato, H., Wakamatsu, A., Ishii, S., Yamamoto, J., Isono, Y., Kawai, Hio, Y., Saito, K., Nishikawa, T., Kimura, K., Yamashita, H., Matsuo, K., Nakamura, Y., Sekine, M., Kikuchi, H., Kanda, K., Wagatsuma, M., Murakawa, K., Kanehori, K., Takahashi-Yulii, A., Oshima, A., Sugiyama, A., Kawakami, B., Suzuki, Y., Sugano, S., Nagahari, K., Masuho, Y., Nagal, K. and Isogai, T. Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCCACGCGCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             42 AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAGGCGCAACAACATCTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 9, Length 3176;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 13176 / 1317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  83.8%; Score 1470.8; DB 9;
larity 91.1%; Pred. No. 2e-233;
Conservative 0; Mismatches 152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nat. Genet. 36 (1), 40-45 (2004) 14702039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      human cDNAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Simi
Matches 1562;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                           2779
                                                                                                                                                                                                                                                                                                                                                                                                         2839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3259
                                                                                       2660 GCTGTTCGTGGTCGCTCACGTTTGTGCGCTACAACGATACCCCCATCGTCATCACGAGGCCTCGGG 2719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3379
                                                                                                                                                                                                                                                                                                                                    CATGATCGCAGAGCCGGACCTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGG 1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRI 30-JAN-2004
highly similar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGT 1541
                                                                                                                                                                                             941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ota,T., Suzuki,Y., Nishikawa,T., Otsuki,T., Sugiyama,T., Irie,R., Wakamatsu,A., Hayashi,K., Sato,H., Nagai,K., Kimura,K., Makita,H., Sekine,M., Obayashi,M., Nishi,T., Shibahara,T., Tanaka,T., Ishii,S., Yamamoto,J., Saito,K., Kawai,Y., Isono,Y., Nakamura,Y., Nagahari,K., Murakami,K., Yasuda,T., Iwayanagi,T., Wagatsuma,M., Shiratori,A., Sudo,H., Hosoiri,T., Kaku,Y., Kodaira,H., Kondo,H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalla, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCAGGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3140 GCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCCGAGGCGTGCCCGAGACCTTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3320 GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGT
                                                                                                                                                                                                                                         2720 CCGGGAGCTGAGCTACGTGCTGCTGCCGGCATCTTTCTGTGCTACGCCACTACCTTCCT
                                                                                                                                                                                                                                                                                                                                                                         CATGATCGCAGAGCCGGACCTGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATGAGCATCAGCTACGCGGCCCTGCTGACCAAGCCCAACCGCATTACCGCATCTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCAGGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCACCCCGGCCTCGCAGCTGGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CACCTTCATCCTCATCTCCCTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTCCCACTGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCCCATCTTTTTGGCACCTCACAGTCAGCGACAAGCTGTACATCCAGACAACCACT
                                                                                                                                                                                          CCGGGAACTGAGCTACGTGCTGCCGGGCATCTTTCTGTGCTACGCCACTACCTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CATGAGCATCAGCTACGCGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              caccircarccicarcrecadeaecreciceecarcieererecarerecare
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTCCCACTCGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCCGCTTTGCCAGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTGATGGTCACGTGTACTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCCATCTTTTTGCCACCTCACAGTCAGCGACAAGCTGTACATCCAGACAACCACACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTACATCATCTTTCCA 1559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2900
                                                                                                                                                                                                                                                                                                                                                                                                  2780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1542
                                                                                                                                                                                          882
                                                                                                                                                                                                                                                                                                                                    942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 6
AK122982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
```

g ઠે g 8 a ò 유 ઠે 요 ઠે 윱 δ

ઠ

ö

Gapa

879 161

0y 1212 CGTGCTCAAGTGCGAACTTCGGACCTCATCTGCCTGCTGGGCTACAGCATGCT 1301 1302 GTGGTCAAGTGCGACATTCTCGACCTCATCTCTCCCTGCTGGGCTACAGCATGCT 2079 0y 1302 GTCATGGTCACGTGACATTCTCGCTCATCTCTCGCTGGGCTACAGCATGCT 2079 0y 1302 GTCATGGTCACGTGACTCATCATCACGCTCATCTCGCTGGCTG	RESULT 7 AR208972 LOCUS LOCUS DEFINITION Sequence 1 from patent US 6384205. AR208972 VERSION AR208972.1 GI:2151026 KEYWORDS SOURCE Unknown. ORGANISM Unknown. TILLE Metabotropic glutamate receptor 4 nucleic acid JOURNAL Patent: US 6384205. AUTHORS Belagaje, R.M. and Mu.S. I (Dasse 1 to 3431) AUTHORS Belagaje, R.M. and Mu.S. I (Dasse 1 to 3431) AUTHORS Belagaje, R.M. and Mu.S. I (Dasse 1 to 3431) AUTHORS Belagaje, R.M. and Mu.S. I (Dasse 1 to 3431) AUTHORS Belagaje, R.M. and Mu.S. I (Dasse 1 to 3431) AUTHORS Belagaje, R.M. and Mu.S. I (Dasse 1 to 3431) AUTHORS Belagaje, R.M. and Mu.S. I (Dasse 1 to 3431) AUTHORS Metabotropic glutamate receptor 4 nucleic acid JOURNAL Patent: US 6384205-1 107-MAY-2002; FRATURES I (A331) Author/AUTHORS Metabotropic glutamate "unknown" Author/AUTHORS Metabotropic glutamate "last" Author/AUTHO	Query Match 83.8%; Score 1470.8; DB 6; Length 3431; Best Local Similarity 91.1%; Pred. No. 2e-233; Matches 1562; Conservative 0; Mismatches 152; Indels 0; Gaps 0; Qy 42 AGGSTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACGGCGAACATCTGGTT 101 Db 1051 AGGSTTCGACGCTACTTCTCCAGCGCACGCTGGACAACAACGGCGCAACATCTGGTT 1110 Qy 102 TGCCGAGTTCTTCTCGAGGACAACTTCCAACAACTGGCCAACGAACATCTGGTT 1110 Db 1111 TGCCGAGTTCTTGGGAGGACAACTTCCATTGCAGCAGCCCCCCCC
162 AAGCCACATCAGGAGGCACACTGCAGGCCACAGGCCTCAAGAAGG 939 163 AAGCCACATCAGGAGGCACACCAGGCCTACGGCCACAGGCCTATGAGCA 221	702 CGACATGCGGCCCACAGAGAACCGCACGAGCTGCCCATCGTCAAGTTGGA 761 1480 TGACATGCGGCCCACAGAGAACCGCACGCGCCCATCCCCATCGTCAAGTTGGA 1539 762 GTGGGACTCGCCGTGGGCGCTGCTGCCCGTTGCTGGCGTGGCATCGCCGCCAC 821 1540 GTGGGACTCGCCGTGGCTGCTGCCCTTTCCTGGCCGTGGTGGGCATCGCCGCAC 821 1540 GTGGGCTCGCCTGGCTGCTGCTGCTCCTTTCTTGGCGTGGGCATCGCTGCTGCAC 1599 822 GCTGTTCGTGGTGATCACGTTTGTGCGCTACAAGACACGCCTCGTGGCGCAC 1599 822 GCTGTTCGTGGTGATCACGTTTGTGCGCTACAAGACACGCCTCGTGGGG 881 1600 GTTGTTCGTGGTGCTGCTGGCTGGCTGGCTGGCACGCCATCGTCAGGCCTCGGG 881 1600 GTTGTTCGTGGTACCTTTGTGGCGCTACAACGACACGCCATCGTCACGCCTCCTTCT 1610 GTTGTTCGTGGTACCTTTGTGGCGCTACACGACACGCCCATCGTCACGCCTCCTTCT 1610 GTTGTTCGTGGTACCTTGTGGCGCACACGCCCATCGTCACGCCCTCCTTCT 1610 GTTGTTCGTGGTACGTGCTGGCGGCATCTTCTTGTGCTACGCCCACCTTCCT 7119 1600 CCGTGAACTGGCTACGTGGCGAACCTTGTGCTATGCCACCCTTCCT 7119 1610 GTTGTTCGTGGTACGTGGCTGCTGGCCAGCATCTTCCTGGGCTCCTTCCT	1002 CATGAGCATCAGCTACGCGGCCCTGCTGAAGACCAAGCGCATTTACCGCATCTTTGA 1061

2550 1601 2610 1661 1721

6 6 6 6 6 6

원

යි දි

음 중

g 8 ò g 8

```
ARILDTCSRDTHALEQSLTFVQALIEKDGTEVRCGSGGPPIITKPERVVGVIGASGSS VSIMVANILRLFKIPQISYASTAPDLSDNSRYDFFSRVVPSDTYQAQAMVDIYRALKW NYSTYASEGSYGESGYERFTROKSREDGGVCIAQSVKIPREPKAGEPDKIIRRLETS NARAVIIFANEDDIRKVLAARRANQTGFFFWGSSDSGKSKIAPVLHLEEVAGGAVTILPETS LPKRANSVRGPRYRFSSRTLDNNRRNIWFREFWGSDSNGSKIAPVLHLEEVAGGAVTILPETS RIGQDSAYEQERGYRFSRTLDNNRRNIWFREFWEDDIFFKLSBHALKKGSHVKKCTNRE RIGQDSAYEQEGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKYI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HSU92457 3431 bp mRNA linear PRI 07-JUL-1999
Human metabotropic glutamate receptor 4 mRNA, complete cds.
U92457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /trānslation="mpGkRGLGWWWarlpLCLLLSLYGPWMPSSLGKPKGHPHWNSIR
IDGDITLGGLPPVHGRGSEGKPCGELKKEKGIHRLEAMLPALDRINNDPDLLPNITLG
                                                                                                                                                                                                                                                                                                                                                          2671 cegacadeccaagrereaecrerecaaaacerreaeececeaecereeceaacea 2730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 3431)

1 (bases 1 to 3431)

Nu,S., Wright,R.A., Rockey,P.K., Burgett,S.G., Arnold,J.S., Rosteck,P.R. Jr., Johnson,B.G., Schoepp,D.D. and Belagaje,R.M. Group III human metabotropic glutamate receptors 4, 7 and 8: molecular cloning, functional expression, and comparison of pharmacological properties in RGT cells

Brain Res. Mol. Brain Res. 53 (1-2), 88-97 (1998)
CGTCGTTACGGCGGCCACCATGTCCAACAAGTTCACGCAGAAGGGCAACTTCCGGCCCAA
                                                                                                                                                                                                                                                                                                                          TGGGGAAGCCAAATCAGAGCTGTGTGAGAACCTGGAGACCCCCAGCGCTGGCTACCAAACA
                                                                    GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGT
                                                                                                                                         GACGGTCTCGGTGAGTCTGAGCGCCTCGGTGTCCCTGGGAATGCTCTACATGCCCAAAGT
                                                                                                                                                                                        CTACATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGC
                                                                                                                                                                                                           CTACATCATCTTCTTCCACCGGAGCAGAACGTGCCCAAGCGCAAGCGCAAGCCTCAAAGC
                                                  CCCCATCTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACCACACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 (bases 1 to 3431)
Mu,S. and Belagaje,R.M.
Direct Submission
Submitted (07-MAR-1997) mc625, Eli Lilly and Company, Lilly
Corporate Center, Indianapolis, IN 46285, USA
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=1
/product="metabotropic glutamate receptor 4"
/protein id="Ab51762.1"
/db_xref="GI:1935039"
                                                                                                                                                                                                                                                                                                                                                                                         GACCTACGTCACCACCACCATGCCATCTAG 1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. 3431
/organism="Homo sapiens"
/mol type="mRNA"
/db_xref="taxon:9606"
/clone="HmGluR4-13"
26. 2764
/note="HmGluR4; Group III"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  U92457.1 GI:1935038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9473604
                                                                                                                                                                                                                                                                                          2611
                                                                                                                                                                                                                                                                                                                                                                                                                                2731
                     2371
                                                      1422
                                                                                      2431
                                                                                                                         1482
                                                                                                                                                        2491
                                                                                                                                                                                          1542
                                                                                                                                                                                                                           2551
                                                                                                                                                                                                                                                           1602
                                                                                                                                                                                                                                                                                                                            1662
                                                                                                                                                                                                                                                                                                                                                                                              1722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HESU92457
LOCUS
DEFINITION
ACCESSION
VERSION
SEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
                                                                             셤
                                                                                                                                                g
                                                                                                                                                                                    ò
                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                  용
                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                   용
                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                     8 8
                                                                                                            જે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1301
                        1590
                                                                                                                                                                                                                                                                                                                                                                         GCCCTGCCAACCGGGTGAGGAGAAGACAGTGAAGGCCATGCCTTGCTGCTGGCACTG 1650
                                                                                                                                                                                                                                                                                                                                                                                                                                            CGAGCCTTGCACAGGGTACCAGTACCAGGTGGACCGCTACACCTGTAAGACGTGTCCCTA 1710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCTGATGGTCACGTGTACTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAA 1361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATGATCGCAGAGCCGGACCTGGGGGACCTGTTCGCTCCGCCGCATCTTCCTAGGGCTCGG 1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        941
                                                                        401
                                                                                                                                          461
                                                                                                                                                                                                                                                                            581
                                                                                                                                                                                                                                                                                                                                               641
                                                                                                                                                                                                                                                                                                                                                                                                                701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTTGTTCGTGGTGATCACCTTTGTGCGCTACAACGACACGCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCAGGGCAAACGGTCGCTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAG
                                                                                                                                                                                                                               AATAGAGCGGATGCAGTGGCCAGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCT
                                                                                                                                                                                                                                                                                                 CGAGCCCTGCACCGGGTACCAGTGCACGCTACACACCTGTAAGACCTGCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CATGAGCATCAGCTACGCGGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATGAGCATCAGCTATGCAGCCCTGCTCACCAAGACCAACCGCATCTACCGCATCTTCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCAGGGCAAGCGCTCGGTCAGTGCCCCACGCTTCATCAGCCCCGCCTCACAGCTGGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACCTICATCCTCATCTCCCTGCAGTGCTCGGCATCTGCGTGCTTCGTGGTGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTCCCACTCGGTGGTGGACTTCCAGGACCACGGACACTTGACCCCCCGCTTTGCCAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              creceacregiegregacirceagaceageaceagacaciceaceececerregeage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGTAACCTTCAATGAGAACGCAGGCCACCGGGGCGCTACGACATCTA¢CAGTACCAACT
                                                                                                                                                                                                                                                                                                                                               GCCCTGCCAGCCCGGGAAGAAGAAGACTGTGAAGGGCATGGCTTGCTGCTGGCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGA
                                                                        TGGCACCCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                    1291
                                                                                                                                                                                                                                                                              522
                                                                                                                                                                                                                                                                                                              1531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1302
                                                                                                                                                                          1411
                                                                                                                                                                                                                                             1471
                                                                                                                                                                                                                                                                                                                                               582
                                                                                                                                                                                                                                                                                                                                                                                                                                                   1651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2071
                                                                         342
                                                                                                         1351
                                                                                                                                                                                                           462
                                                                                                                                                                                                                                                                                                                                                                                1591
                                                                                                                                                                                                                                                                                                                                                                                                                  642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1242
                                                                                                                                          402
```

a

g

8 8 8

8 8 8

a

ઠે g ò 셤

ò g ð a

ò

Jun

Wed

ઠે

ઠે ద ð

us-10-828-332-6.rge

```
RIVUNESGIAGNPUT FNENGDAPGRYDI YQYQLRNDSAEVKVIGSWTDHLHLRI ERMHW
PGSGQQLPRSI CSLPCQPGERKKTVKGMPCCHICEPCTGYQYQURTYTCKTCGYDMRP
TENRTGCRP IP II IKLEMGSPMAVL ELFLAVVGIAATLEVVITFVRYNDTPI VKASGRE
LISYVLLAGRP IP II IKLEMGSPMAVL ELFLAVVGIAATLEVVITFVRYNDTPI VKASGRE
LISYVLLAGRP IP OF THE SPASTLANG TENGLASI SYAALLYKTVRRITYR IFE
GGRRSVSAPRRI SPASQLAI TFELI SLQLLGI CVWFVVDPSHSVVDFQDQRTLDPRFA
RQYLKCU SID SLGLLGLAS SMALLWYTCTVYA IRTRGVPET FYRBARDI GFFTWYTFO IVW
LARI FFFGTSQCASILLY 10TTTLYGVSLSASVSLGALYMPKVY TILFPPEGNVPKR
KRSLKAVVTAATMSNKFTQKGNFRPNGEAKSELCENLEAPALATKQTYVTYTNIAI"
                                                                                                                                                                                                                       1110
                                                                                                                                                                                                                                                                             1170
                                                                                                                                                                                                                                                                                                                                                                                          1290
                                                                                                                                                                                                                                                                                                                                                                                                                                               1350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1950
                                                                                                                                                                                                                                                                                                                                    CAGCCACGTCAAGAAGTGCACCAACCGTGAGCGAATTGGGCAGGATTCAGCTTATGAGCA 1230
                                                                                                                                                                                             101
                                                                                                                                                                                                                                                  161
                                                                                                                                                                                                                                                                                                          221
                                                                                                                                                                                                                                                                                                                                                                281
                                                                                                                                                                                                                                                                                                                                                                                                                       341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  941
                                                                                                                                                                                                                                                               1351 TGGCACCCAGCTGCTTAAGTACATCCGAAACGTCAACTTCTCAGGCATCGCAGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAGCGCAACATCTGGTT
                                                                                                                                                                                                          GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCGCAACGATTCTGCCGAGTACAAGGTCATTGGCTCCTGGACTGACCACCTGCACCTTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGAGCCTTGCACAGGGTACCAGTACCAGGTGGACCGCTACACCTGTAAGACGTGTCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AATAGAGCGGATGCAGTGGCCAGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCCTGCCGGCGGGGGGGGGAAGGAAGAACTGTGAAGGGCATGCTGCTGCTGCCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTTGTTCGTGGTGATCACCTTTGTGCGCTACAACGACGCCCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gарв
                                                                                                                                                                                                                                                  TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCCACGCGCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                                             GGAGGGGAAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGGCCCACGCGCTGCACGC
                                                                                                                                                                                                                                                                                                                                                                                                                     CATGCACCGTGACCTGTCCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGTAACCTTCAATGAGAACGGAGGCGCACCTACGACATCTACCAGTACCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGAGCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCGGGAACTGAGCTACGTGCTGCCGGGCATCTTTCTGTGCTACGCCACTACCTTCCT
                                                                                                                                     Score 1470.8; DB 9; Length 3431;
Pred. No. 2e-233;
0; Mismatches 152; Indels 0;
                                                                                                                                     Query Match
Best Local Similarity 91.1%;
Matches 1562; Conservative
                                                                                                                                                                                                                                                                                                                                  1111
                                                                                                                                                                                                                                                                                                        162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1831
                                                                                                                                                                                                                                                  102
                                                                                                                                                                                                                                                                                                                                                                                                                                               1291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           822
                                                                                                                                                                                              42
                                                                                                                                                                                                                                                                                                                                                                                                                     282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1651
                                                                                                                                                                                                                                                                                                                                                               222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     762
                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6 6 6
                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                         ያ ያ
                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                             8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8 & 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        중 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
```

ઠે

8 & 8

8 &

ઠે

8 6

2310 2370 1481 2550 2610 2730 1061 1181 1601 1661 PRI 30-JAN-2004 highly similar TGGGGAAGCCAAATCAGAGCTGTGAGAACCTGGAGACCCCCAGCGCTGGCTACCAAACA 1721 Ota,T., Suzuki,Y., Nishikawa,T., Otsuki,T., Sugiyama,T., Irle,R., Wakamatsu,A., Hayashi,K., Sato,H., Nagai,K., Kimura,K., Makita,H., Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo. CATGATCGCTGAGCCCGACCTTGGCACCTGCTCGCTGCCCGAATCTTCCTGGGACTAGG CTCCCACTCGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCCGCTTTGCCAGGGG CTCCCACTCGGTGGTGGACTTCCAGGACCAGCGGACACTCGACCCCCGGCTTCGCCAGGGG GATGAGCATCAGCTATGCAGCCCTGCTCCACCAAGACCAACCGCATCTACCGCATCTTCGA GCAGGCAAACGGTCGGTCAGTGCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCAT GCAGGGCAAGCGCTCGGTCAGTGCCCCACGCTTCATCAGCCCCGCCTCACAGCTGGCCTGTT CACCTTCATCCTCATCTCCCTGCAGCTGCTCGCCATCTGCGTGTGGTTCGTGGTGGACCC GCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAA CCCCATCTTCTTTGCCACCTCGCAGTCGCCCAACCTGTACATCCAGACGACGACGCT GACGGTCTCGGTGAGTCTGAGCGCCTCGGTGTCCCTGGGAATGCTCTACATGCCCCAAAGT CATGAGCATCAGCTACGCGGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGA rerecteaacretereacereterescereterescerecteresceraceacere CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACACT CGTGGTCACCGCCGCCACCATGTCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAA GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGT CTACATCATCCTCCTCCACCCGGAGCAGAACGTGCCCCAAGCGCAAGCGCAGTCTCAAAGC Homo sapiens (human)

1850 bp mRNA linear
Homo sapiens cDNA FLJ16445 fis, clone BRAMY3008937,
to Metabotropic glutamate receptor 4 precursor.
AK122836
AK122836
AK122836
AK122836
Homo sapiens (human)
Homo sapiens
Filearine GACCTACGTCACCTACACCAACCATGCCATCTAG 1755 GACTTACGTCACTTACACCAACCATGCAATCTAG 2764 Chordata; Primates; Eukaryota; Metazoa; Mammalia; Eutheria; 1951 2011 1122 2131 1182 1242 2251 1302 2311 1362 2431 2491 2551 1602 2611 1662 1002 1062 2071 2191 1422 1482 1542 2671 1722 942 2731 RESULT 10 AK122836 LOCUS DEFINITION VERSION KEYWORDS SOURCE ORGANISM REFERENCE AUTHORS ACCESSION 8 6 상 음 8 8 8 6.868 8 B 요 ò a දි දි ₹ <u>ያ</u> Q 욧. 뭐 ò 名 ò 셤

341

401

461

```
1861 TGTGACCTTCAATGAGAATGGAGATGCGCCTGGGCGCTATGACATCTACCAATACCAGCT 1920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1681 GGAGGGGAAGGTGCAGTTTGTGATCGATGCCGTGTACGCCATGGGCCACGCCGCTGCACGC 1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1801 TGGCACCCAGCTTAAGTACATCCGAAACGTCAACTTCTCAGGCATCGCAGGAACCC 1860
                1501 AGGCTTCGACCGCTACTTCTCCAGCCGCACGCTGGACAACAACGGCGCGAACATCTGGTT 1560
                                                                                                                                                                                                                                                                                                  2221 GTGGGGCTCGCCCTGGGCCGTGCTCCTTCCTGGCCGTGGGGGAGCATCGCTGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2101 CGAGCCTTGCACAGGTACCAGTACCAGTGGACCGCTACACCTGTAAGACGTGTCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2161 reacarecescenciae de a consecuencia de co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   942 CATGATCGCAGAGCCGGACCTGGGCGCTCGCTCCGCCGCATCTTCCTAGGCCTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1002 CATGAGCATCAGCTACGCGGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2521 gcaddechaddechtdechtagrecteradechtarteathachtechtagrechtagrecht
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            102 TGCCGAGTTCTGGGAGACACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGTAACCTTCAATGAGAACGGAGACGCACCGGGGCGCTACGACATCTACCAGTACCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAAGACCACCTGCACCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            522 AATAGAGCGGATGCAGTGGCCAGGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCCTGCCAGCCCGGGGAGCGAAAGAAGACTGTGAAGGCCATGGCTGCTGCTGCCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGGGACTCGCCGTGGCGCCGTGCTGCCCCTCTTCCTGGCCGTGGGTGGGCATCGCCGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCCATCGTCAAGGCCTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCGGGAACTGAGCTACGTGCTGCTGGCGGCATCTTTCTGTGCTACGCCACTACCTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2401 cargarcecreaecceaectrescaccrecrecrecrececeaarcricereseacrass
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCAGGGCAAACGGTCGGTCGCCCCGCGTTTCATCAGCCCCGGCCTCGCAGCTGGCCAT
                                                                                                                                                                                                                                                     162 AAGCCACATCAAGAAGTGCACCAACCGAGAGGGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGAGCCCTGCACCGGGTACCAGTACCAAGTGGACCGCTACACCTGTAAGACCTGCCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1062
                                                                                                                                                                                                                                                                                                                                                                                                           222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                    ò
                                                                                                                                                         셤
                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
Sekine, M., Obayashi, M., Nishi, T., Shibahara, T., Tanaka, T., Ishi, S., Yamamoto, J., Saito, K., Kawai, Y., Isono, Y., Nakamura, Y., Nagahari, K., Muzakami, K., Yasuda, T., Iwayanagi, T., Wagatsuma, M., Shiratori, A., Sudo, H., Hosoiri, T., Kaku, Y., Kodaira, H., Kondo, H., Sugawara, M., Takahashi, M., Kanda, K., Kaku, Y., Kadista, H., Kondo, H., Kikkawa, E., Omura, Y., Abe, K., Kamhara, K., Katanabe, T., Yamashita, H., Haraka, B., Omura, Y., Tanai, H., Yamashita, H., Watanabe, M., Hurakawa, S., Chiba, Y., Ishidashi, T., Yamashita, H., Haraka, S., Chiba, Y., Ishida, S., Ono, Y., Takiquchi, S., Watanabe, S., Yosida, M., Hotuta, T., Kusano, J., Kanehori, K., Takahashi-Pujii, A., Hara, H., Tanase, T., Kusano, J., Kanehori, K., Takahashi-Pujii, A., Takeuchi, K., Artia, M., Imose, M., Musashino, K., Yuuki, H., Oshima, A., Sasaki, N., Sano, S., Yoshikawa, Y., Matsuna, H., Satoh, N., Takami, S., Goto, Y., Shimizu, F., Wakebe, H., Hishigaki, H., Matanabe, T., Shipata, Y., Shimizu, F., Wakebe, H., Hishigaki, H., Watanabe, T., Shipata, A., Takemoto, M., Kawakami, B., Yamazaki, M., Takura, S., Fukuzumi, Y., Fujimori, Y., Komiyama, M., Tashiro, H., Tanigami, A., Fujiwara, T., Ono, T., Yamada, T., Oot, T., Yamada, T., Oot, T., Yamada, T., Oot, T., Yamada, T., Oot, T., Yamada, T., Matanaba, M., Sasaki, M., Togashi, T., Matauno, T., Momori, Y., Masubo, Y., Wasuba, T., Mata, T., Shizeta, K., Matanabe, M., Sasaki, M., Togashi, T., Shizeta, K., Matanabe, M., Sasaki, M., Togashi, T., Mata, T., Wasuba, M., Sasaki, M., Togashi, T., Nakamura, N., Komatsu, T., Masubo, Y., Vamashita, R., Nakai, Y., Nakausa, Y., Ohama, M., Komatsu, T., Wasuba, T., Ohuna, N., Yamashita, R., Nakai, K., Yada, T., Nakamura, Y., Ohara, O., Isogai, T. and Sugano, S. Complee sequencing and characterization of 21,243 full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Who main the sequencing project (Included the sequencing project (Included the sequencing project (Included the sequence).

Submitted (15-UTL-2003) Takao Isogai, FLJ Project (HRI Team); 2-6-7 Kazusa-Kamatari, Kisarazu, Chiba 292-0818, Japan (Included the sequencing project supported by Ministry of E-mail:genomics@hri.co.jp, Tel:81-438-52-3975, Fax:81-438-52-3986) NEDO human cDNA sequencing project supported by Ministry of E-mail:genomics@hri.co.jp, Tel:81-438-52-3975, Fax:81-438-52-3986) NEDO human cDNA sequencing project supported by Ministry of E-onograch Association for Biotechnology (RAB); cDNA full insert sequencing: Rey Technology Center etc.); 5'- & 3'-end one pass sequencing: RAB, HRI, and Biotechnology Center, National Institute of Technology and Evaluation; clone selection for full insert sequencing: HRI and RAB; annotation; HRI and RAB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Oshima, A., Takahashi-Fujii, A., Tanase, T., Imose, N., Takeuchi, K., Arita, M., Musashino, K., Yuuki, H., Hara, H., Sugiyama, T., Irie, R., Otsuki, T., Sato, H., Wakamatsu, A., Ishii, S., Yamamoto, J., Isono, Y. Kawai-Hio, Y., Satio, K., Nishikawa, T., Kimura, K., Yamashita, H., Matsuo, K., Nakamura, Y., Sekine, M., Kikuchi, H., Kanda, K., Wagatsuma, M., Murakawa, K., Kanehori, K., Sugiyama, A., Kawakami, B., Suzuki, Y., Sugano, S., Nagahari, K., Masuho, Y., Nagai, K. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAGCGCAACATCTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           83.8%; Score 1470.8; DB 9; Length 3850;
llarity 91.1%; Pred. No. 1.9e-233;
Conservative 0; Mismatches 152; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /tissue type="amygdala"
/clone lib="BRAMY3"
/note="cloning vector: pME18SFL3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Isogai,T.
NEDO human cDNA sequencing project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="BRAMY3008937"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nat. Genet. 36 (1), 40-45 (2004) 14702039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .3850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            numan cDNAs
```

PUBMED REFERENCE AUTHORS

JOURNAL

TITLE JOURNAL REFERENCE AUTHORS

TITLE

COMMENT

2040

1980

521

581

2100

641

2160

701

2220

761

2280

821

2340

881

2400

941

1001

2460 1061 2520 1181

g

Matches 1562; 42

Query Match

FEATURES

Wed

요

g

ઠે

g

ઠ

셤

ઠે

요 δ

δ

8

g

ò

g

셤

ઠ

a

ઠે

ઠે

```
LPKRMSVRGFDRYFSSRTLDNNRRNIWFAEFWEDNFHCKLSRHALKKGSHVKKCTNRE
RIGQDSAYEQBGKVQFVIDAVYAMGHALHAMHRDLCPGRVGLCPRMDPVDGTQLLKYI
RNVNFSGIAGNFVTFRENGDAPGRYDIYQQLANDSAKYKVIGSWTDHLHLALERHWH
PGSGQQLPRSICSLFPQYTTKLWGMPCCWHCEPCTGYQYQVDRYTCKTCPYDMRP
TENRTGCRPIPIKLEWGSPMAVLPLFLAVVGIAATLEVVITFVRYNDTPIVKASGRE
ISYVLLAGIFLCYATTFLMIAEPDLGTCSLRRIFLGGMSISYAMDTPIVKASGRE
RGYKKYDSPRSISPAGQLAIFFSLISLQLLGTCWFVVDFBTFWDTYRIYRIF
GGRRSVSAARRISDLGTGSSAMLMYTCTVYAIKKRVVDFBTFNBAKPIGFTTTCIV
IARLIPERTSQSAMLAYTCTTVYAIKKROFPTGMTLDFRFA
KRSLKAVVTAATMSNKFTQKGNFRPNGEAKSELCENLEAPALATKGTVVTYTNHAI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                grogaricoccorocorocrocrocrocrocrocrocrocrosrogrogaros de la company de l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGCCACGTCAAGAAGTGCACCAACGAGGGAATTGGGCAGGATTCAGCTTATGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATGCACCGTGACCTGTGTCCCGGCGCGCGCGCTCTGCCCCGCGCATGGACCCTGTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCCACGCGCTCAAGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1556 rereaccricaareacaareaacaccrececerareacareracaaraccaccr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGAGGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCCATGGGCCCACGCGCTGCACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AATAGAGCGGATGCAGTGGCCAGGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCCCTGCCAGCCCGGGGAGCGAAAGAAGACTGTGAAGGGGCATGGCTTGCTGCTTGGCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGAGCCCTGCACCGGGTACCAGTGGACCGCTACACTGTAAGACCTGCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGACATGCGGCCCACAGAGAACCGCACGAGGTGCCAGCCCATCCCCATCGTCAAGTTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACAACAGGCGCAACATCTGGTT</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGTAACCTTCAATGAGACGGAGACGCACCGGGGCGCTACGACATCTACCAGTACCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCGGGAACTGAGCTACGTGCTGCTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCCT
                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                               6; Length 3884;
                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                             Score 1470.8; DB 6; Length
Pred. No. 1.9e-233;
0; Mismatches 152; Indels
                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 91.1%;
Matches 1562; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                   102
                                                                                                                                                                                                                                                                                                                                                   42
                                                                                                                                                                                                                                                                                                                                                                                         1196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               582
                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        કે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /pocesti de="CAA02880.1"
/db xref="G1:2300445"
/tb xref="G1:2300445"
/translation="MPGKRGLGWWARLPLCLLLSLYGPWMPSSLGKPKGHPHMNSIR
/translation="MPGKRGLGWWARLPLCLLLSLYGPWMPSSLGKPKGHPHMNSIR
IDGDITLGGLFPVHRGSSGKRCGELKKEKGTHRLEAMLFALDRINNDPDLLPNITLG
ARILDTCSRDTHALEQSLTFVQALIEKDGTEVRCGSGGPPIITKPERVVGVIGASGSS
SNGWANLINLEKIPQISYASTRAPLSDSNSRYDFSRVVPSDTYQAQAWDIYRALKW
NYVSTWASEGSYGEVEAFIQKSREDGGVCIAQSYKIPREFKAGEPDKIIRLLETS
NARAVIIFANEDDIRRVLEAARRANQTGHFFWMGSDSWGSKIAPVLHLEEVAEGAVTI
                                                                                                            1301
                                                                                                                                                      2760
                                                                                                                                                                                                 1361
                                                                                                                                                                                                                                           2820
                                                                                                                                                                                                                                                                                     1421
                                                                                                                                                                                                                                                                                                                             2880
                                                                                                                                                                                                                                                                                                                                                                       1481
                                                                                                                                                                                                                                                                                                                                                                                                               2940
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PAT 07-MAR-1997
                          GCTCATGGTCACGTGCACGTGTATGCCATCAAGACACGCGGGGCGTGCCCGAGACCTTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGTGGTCACCGCCGCCACCATGTCCAAGTTCACACAGAAGGGCAACTTCAGGCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGGGGAAGCCAAATCAGAGCTGTGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGAGAGGCCAAGTCTGAGCTCTGCGAGAACCTTGAGGCCCCAGGCGCTGGCCAAACA
                                                                                                                                     TGAGGCCAAGCCCATGGCTTCACCATGTACACCACTTGCATCGTCTGGCTTGGTTCAT
                                                                                                                                                                                                                                                                                                                                                                       CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGCGCAGCCAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGTCGTTACGGCGGCCACCATGTCCAAGAGTTCACGCAGAAGGGCAACTTCCGGCCCAA
                                                                                                          GCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCCGAGGCGTGCCCCGAGACCTTCAA
                                                                                                                                                                                                                                                                                                                                                                                             CCCCATCTTCTTTGGCACCTCGCAGTCGGCCGACAAGCTGTACATCCAGACGACGACGACGCT
                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .3884
/organism="unidentified"
/mol_type="unassigned DNA"
/db_xref="taxon:32644"
171. .2909
/note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GACCTACGTCACCTACACCATGCCATCTAG 1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACTTACGTCACTTACACCATGCAATCTAG 3214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          unidentified
unidentified
unclassified
1 (bases 1 to 3884)
Makoff,A.J.
HUMAN GLUTAMATE RECEPTOR PROTEINS
PATENT: WO 9522609-A 3 24-AUG-1995;
WELLCOME FOUND (GB)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A46196 3884 bp
Sequence 3 from Patent W09522609.
A46196
A46196.1 GI:2300444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon start=1
                                                                  2641
                                                                                                            1242
                                                                                                                                                    2701
                                                                                                                                                                                                 1302
                                                                                                                                                                                                                                                                                   1362
                                                                                                                                                                                                                                                                                                                             2821
                                                                                                                                                                                                                                                                                                                                                                       1422
                                                                                                                                                                                                                                                                                                                                                                                                               2881
                                                                                                                                                                                                                                                                                                                                                                                                                                                       1482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3121
                                                                                                                                                                                                                                           2761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 11
A46196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDS
```

341

401

461

761

ö

දු දු

ð a g

8 8

8 8 8

δ

6 B

ద

8 8

g ઠે

ઠે

```
1255
                                                                                                                                                            1315
                                                                                                                                                                                                 1375
                                                                                                                                                                                                                                      1435
                                                                                                                                                                                                                                                                           1495
                                                                                                                                                                                                                                                                                                                1555
                                                                                                                                                                                                                                                                                                                                                     1615
                                                                                                                                                                                                                                                                                                                                                                                          1675
                                                                                                                                                                                                                                                                                                                                                                                                                               1735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATGATGGCAGAGCCGGACCTGCTCGCTCGCCGCGCATCTTCCTAGGGCTCGG 1001
                                                                                                      101
                                                                                                                                          161
                                                                                                                                                                               221
                                                                                                                                                                                                                     281
                                                                                                                                                                                                                                                          341
                                                                                                                                                                                                                                                                                                401
                                                                                                                                                                                                                                                                                                                                   461
                                                                                                                                                                                                                                                                                                                                                                         521
                                                                                                                                                                                                                                                                                                                                                                                                             581
                                                                                                                                                                                                                                                                                                                                                                                                                                                   641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           941
                                                                                                                                          1496 TGGCACCCAGCTGCTTAAGTACATCCGAAACGTCAACTTCTCAGGCATCGCAGGGAAACCC
                                                                                                                                                                                                                                                                                                                                                                                  CAGCCACGTCAAGAAGTGCACCAACCGTGAGCGAATTGGGCAGGATTCAGCTTATGAGCA
                                                                                                                                                                                                                                                                                                                                             1556 TGTGACCTTCAATGAGAATGGAGATGCGCCTGGGCGCTATGACATCTACCAATACCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                        CGACATGCGGCCCACAGAGAACCGCACGAGCTGCCAGCCCATCCCCATCGTCAAGTTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GFGGGACTCGCCGTGGGCCCGTGTTTCTCTGGCCGTGGTGGGCATCGCCGCCAC
                                                                                                                                                                                AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA
                                                                                                                                                                                                                                                          CATGCACCGTGACCTGTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA
                                                                                                                                                                                                                                                                                                TGGCACCCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC
                                                                                                                                                                                                                                                                                                                                    TGTAACCTTCAATGAGAAGGGAGAGGCGCACGGGGGGGGCGCTACGACATCTACCAGTACCAACT
                                                                                                                                                                                                                                                                                                                                                                        GCGCAATGGCTCGGCCGAGTACAAGGTCATCGGCTCGTGGACAGACCACCTGCACCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                              AATAGAGCGGATGCCAGGCCAGGGAGTGGCCAGCAGCTGCCGCGCTCCATCTGCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCCTGCCAGCCCAGGCGAAGAAGAAGACTGTGAAGGGCATGGCTTGCTGCTGGCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGG
                                                                                                      AGGGTTCGACCGATACTTCTCCAGCCGCACGCTGGACAACACACGCCGCAACATCTGGTT
                                                                6; Length 3884;
                                                                                   ;
0
                                                               Score 1470.8; DB 6; Length
Pred. No. 1.9e-233;
); Mismatches 152; Indels
US 6500938-A 1074 31-DEC-2002;
Location/Qualifiers

    3884
    organism="unknown"
    mol_type="genomic DNA"

                                                                                  .
                                                               Query Match 83.8%;
Best Local Similarity 91.1%;
Matches 1562; Conservative C
Patent:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1916 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2036
                                                                                                                                                                                 162
                                                                                                                                                                                                                                                                                                342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             882
                                                                                                                         1196
                                                                                                                                                                                                  1316
                                                                                                                                                                                                                                        1376
                                                                                                                                                                                                                                                                             1436
                                                                                                                                                                                                                                                                                                                                                                                                                                                     582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1796
                                                                                                      42
                                                                                                                                                                                                                     222
                                                                                                                                                                                                                                                           282
                                                                                                                                                                                                                                                                                                                                     402
                                                                                                                                                                                                                                                                                                                                                                          462
                                                                                                                                                                                                                                                                                                                                                                                                               522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   942
                    Bource
JOURNAL
         FEATURES
                                               ORIGIN
                                                                                                                                                                                                                                                                                                              8 & 8
                                                                                                                                                                                                                                                                                                                                                                   8 6 8 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                 6 6 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     අ දු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                        g
                                                                                                                                                                                              ያ ያ
                                                                                                                                                                                                                                  8 8
                                                                                                                                                                                                                                                                        요 요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                        셤
                                                                                                                                                                               ò
                                                                                                       δ
                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                  2575
                                                                                                                                                                                                                                                                                                                                                                                                                                  2755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2875
          2095
                                                                                   2215
                                                                                                                         2275
                                                                                                                                             1181
                                                                                                                                                              2335
                                                                                                                                                                                 1241
                                                                                                                                                                                                   2395
                                                                                                                                                                                                                     1301
                                                                                                                                                                                                                                        2455
                                                                                                                                                                                                                                                            1361
                                                                                                                                                                                                                                                                              2515
                                                                                                                                                                                                                                                                                                1421
                                                                                                                                                                                                                                                                                                                                     1481
                                                                                                                                                                                                                                                                                                                                                       2635
                                                                                                                                                                                                                                                                                                                                                                           1541
                                                                                                                                                                                                                                                                                                                                                                                            2695
                                                                                                                                                                                                                                                                                                                                                                                                               1601
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1721
                            1001
                                                                 1061
                                                                                                      1121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAT 10-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unknown.
Unclassified.
1 (bases 1 to 3884)
Au-Young, J. and Seilhamer, J.J.
                                                                                                                                                                                                                     CTCCCACTCGGTGGTGGACTTCCAGGACCAGCACACTCGACCCCCGGCTTCGCCAGGGG
                                                                                                                                                                                                                                                                                                 CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACAT
                                                                                                                                                                                                                                                                                                                                                                                    2816 CGGAGAGGCCAAGTCTGAGGCTCTGCGAGAACCTTGAGGCCCCAGCGGTGGCCACCAAACA
CATGATGGCAGAGCCGGACCTGGGGCTGCTCGCTCCGCGCATCTTCCTAGGGCTCGG
                                       CATGAGCATCAGCTACGCGCCCTGCTGACCAAGACCAACCGCATTTACCGCATCTTTGA
                                                                            GCAGGGCAAACGGTCGGTCAGTGCCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCAT
                                                                                                                                             CACCTTCATCCTCATCTCCCTGCAGCTGCTCGCCATCTGCGTGTTCGTGGTGGTGGTGGTCCC
                                                                                                                                                                                 CTCCCACTCGGTGGACTTCCAGGACCAACGGACACTTGACCCCCCGGCTTTGCCAGGGG
                                                                                                                                                                                                                                                            GCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAA
                                                                                                                                                                                                                                                                      GCTCATGGTCACGTGCACGTGTATGCCATCAAGACACGCGGGGCGTGCCCGAGACCTTCAA
                                                                                                                                                                                                                                                                                                          GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGTGGTCACCGCCGCCACCATGTCCCAACAAGTTCACACAGAAGGGCAACTTCAGGCCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGGGAAGCCAAATCAGAGCTGTGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GACCTACGTCACCACCACCATGCCATCTAG 1755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AR270511 3884 bp DN
Sequence 1074 from patent US 6500938,
AR270511
AR270511.1 GI:29701745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2756
                                                                                                                                                              2276
                                                                                                                                                                                                                                                                                                                                                                                                                                   2696
                                                                  1002
                                                                                                                                                                                                    2336
                                                                                                                                                                                                                                                                                                  1362
                                                                                                                                                                                                                                                                                                                   2516
                                                                                                                                                                                                                                                                                                                                                        2576
                                                                                                                                                                                                                                                                                                                                                                           1482
                                                                                                                                                                                                                                                                                                                                                                                              2636
                                               2096
                                                                                                        1062
                                                                                                                                             1122
                                                                                                                                                                                  1182
                                                                                                                                                                                                                                                            1302
                                                                                                                                                                                                                                                                               2456
                                                                                                                                                                                                                                                                                                                                      1422
                                                                                                                                                                                                                                                                                                                                                                                                                 1542
                                                                                                                                                                                                                                                                                                                                                                                                                                                       1602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1722
          2036
                             942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 12
AR270511
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
TITLE
```

g

g

ò අ 요

ò 셤

ઠે

ઠે

ORIGIN Query Match Best Local Similarity 91.1%; Pred. No. 1.9e-233; Matches 1562; Conservative 0; Mismatches 152; Indels 0; Gaps 0;	TCGACCGATACTTC TCGACCGCTACTTC	Oy 102 TGCCGAGTTCTGGGAGGACAACTTCCATTGCAAGTTGAGCCGCCACGCGCTCAAGAAGGG 161	Oy 162 AAGCCACATCAAGAAGTGCACCAAGAGGGCATCGGGCAGGACTCGGCCTATGAGCA 221	Qy 222 GGAGGGAAGGTGCAGTTCGTGATTGACGCTGTGTACGCCATGGCCACGC 281	Qy 282 CATGCACCGTGACTGTCCCGGCCGCGTAGGACTCTGCCCTCGCATGGACCCCGTGGA 341 b 1436 CATGCACGTGTGTCCCGGCCGCGTGGGGCTTTGCCCGCGTTGGACCTTTGGCCCTGTAGA 1495	Qy 342 TGGCACCCAGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATTGCGGGGAACCC 401 Db 1496 TGGCACCCAGCTGCTTAAGTACATCCGAAACGTCAACTTCTCAGGCATCGAGGAACCC 1555	Qy 402 TGTAACCTTCAATGAGAACGGAGACGCCCCGGGGCGCTACGACATCTACCAGTACCAACT 461 bb 1556 TGTGACCTTCAATGAGAATGCGCCTGGGCGCTATGACAATCTACCAATACCAGCT 1615	Qy 462 GCGCAATGGCTCGGCCGAGTACAAGGTCATCGCTCGTGGACAGACCACCTCGG 521 Db 1616 GCGCAACGATTCTGCCGAGTACAAGGTCATTGGCTCCTGGACTGACCACTGCACCTTAG 1675	Qy 522 BATAGAGGGGATGCAGGAAGTGGCCAGCAGCAGCAGCTGCCGCTCCATCTGCAGTCT 581 Db 1676 BATAGAGCGGATGCACTGGCCGGGAGCGGCAGCAGCAGCAGCAGCAGCAGCAGCAGC	Qy 582 GCCTGCCAGCCCGGGAGCGAAAGAAGACTGTGAAGGCATGCCTTGCTGCTGGCACTG 641 Db 1736 GCCTGCCAACCGGGTGAGCGGAAGAAGAGAGCATGCCTTGCTGCTGCTGCCACTG 1795	Qy 642 CGAGCCTGCACCGGGTACCAGTACCAGTACCGCCTACACCTGTAAGACCTGCCCCTA 701	Qy 702 CGACATGCGCCCACAGAGAACCGCACGAGCTGCCCATCGTCAACGTGGA 761 1	Qy 762 GTGGGACTCGCCGTGGCCCTGCTCTTCCTGGCCGTGGTGGGCATCGCCGCCAC 821	Qy 822 GCTGTTCGTGGTGGTCACGTTTGTGCGCTACAACGATACCCCCATCGTCAAGGCCTCGGG 881 Db 1976 GTTGTTCGTGGTGATCACCTTTGTGCGCTACAACGACCCCATCGTCAAGGCCTCGGG 2035	OY 882 CCGGGAACTGGGTGCTGGCGGGCATCTTTCTGTGCTACGCCACTACCTTCT 941	942 CATGATCGCAGAGCCGGACCTGGGGCCTGCTCGCCGCCGCATCTTCCTAGGGCTCGG 100	OY 1002 CATGAGCATCAGCTACGCGCCCTGCTGACGAGACCAACGCATTTACCGCATCTTTGA 1061
Db 2096 CATGATCGCTGAGCCTGGCACCTGCTCGCTGCGCCGAATCTTCCTGGGACTAGG 2155 Qy 1002 CATGAGCATCAGCTACGCGGCCCTGCTGACCAACCGCATTTACCGCATCTTTGA 1061	Qy 1062 GCAGGGCAAAGGGTGGGTGGTGCCCGGGTTTCATCATCAGCCCGGCCTGGAGCTGGCCAT 1121 Db 2216 GCAGGGCAAGGGTCGGTCAGTGCCCCACGCTTCATCAGCCCCGCCTCACAGCTGGCCAT 2275	Qy 1122 CACCTTCATCCTCATCTCCTGCAGCTGCAGCATCTGCGTGTGGTTGGT	Oy 1182 CTCCCACTCGGTGGACTTCCAGGACCAACGAACTTGACCCCGGCTTTGCCAGGG 1241 Db 2336 CTCCCACTCGGTGGTGGACTTCCAGGACCAGGGACACTCGACCCCGGCTTCGCCAGGG 2395	Oy 1242 CGTGCTCAAGTGCGACATCTCGGACCTGTCCCTCATCTGCCTGGGCTACAGCATGCT 1301	Oy 1302 GCTGATGGTCACGTGTACTGTGCATCAAGACCCGAGGCGTGCCCGAGACCTTCAA 1361 	Qy 1362 CGAGGCCAAGGCCTTCACCATGTACACCACTGCATTGTCTGGCTTGGCTTCAT 1421 Db 2516 TGAGGCCAAGCCCATTGGCTTCACCATGTACACCACTTGCATCGGCTGGCT	OY 1422 CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACAT 1481	Qy 1482 GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCCAAAGT 1541 Db 2636 GACGGTCTCGGTGAGTCTGAGCGCTCGGTGTCCCTGGGAATGCTCTACATGCCCAAAGT 2695	OY 1542 CTACATCATCCTCTTCCACCGGAGCAGAACGTGCCCAAGGGCAAGGGCAGTCTCAAAGC 1601	Oy 1602 CGTGGTCACCGCCGCCACCATGTCCAACAAGTTCACACAAAGGGCAACTTCAGGCCCAA 1661	Oy 1662 TGGGGAAGCCAATCAGAGCTGTGTGAGAACCTGGAGACCCCAGGGCTGGCT	Qy 1722 GACCTACGTCACCAACCATGCCATCTAG 1755	T 13	JOCUS ANSBIEGA DEFINITION Sequence 14 from patent US 6608176. ACCESSION AR381464.1 GI:40089522		REFERENCE 1 (bases 1 to 3884) AUTHORS Chaudharl, N. and Roper, S.D. TITLE Taste receptor for umani (monosodium glutamate) taste JOURNAL Patent: US 6608176-A 14 19-AUG-2003;	FEATURES Location/Qualitiers Source 13884 /organism="unknown" /mol_type="genomic DNA"

ORIGIN Query Match Bas.8%; Score 1470.8; DB 6; Length 3884; Best Local Similarity 91.1%; Pred. No. 1.98-233; Matches 1562; Conservative 0; Mismatches 152; Indels 0; Gaps 0; Qy 42 AGGSTTCGACCGATACTTCTCCACCGCACGACGACAACATCTGGTT 101	162 AAGCCACATCAAGAAGTGCACCAACCGAGAGCGCATCGGGCAGGACTCGGCCTATGAGCA	09 342 TGGCACCAGCTGCTTAAGTACATCAGGAACGTCAACTTCTCAGGCATACCGGGGAACCC 401	10	0y 702 CGACATGCGGCCCACAGAGAACCGCAGGCCCATCCCCCATCGTCAGGTTGGA 761 1856 TGACATGCGGCCCACAGAGAACCGCACGGGCCCATCCCCATCATCAGGCTTGA 1915 0y 762 GTGGGACTCGCCTGGGCCGTGCTGCCCCTTTCCTGGCCGTGGTGGCATTGCCGCACCA 821 0y 82 GTGGGCTCGCCTGGGCGTGGTGCCCTTTCCTGGCCGTGGTG
Qy 1062 GCAGGGCAAACGGTCAGTCCCCGCGTTTCATCAGCCCGGCCTCGCAGCTGGCCAT 1121 Db 2216 GCAGGCACGCTCGGTCAGTCCCCCCCCCCCTCTCATCAGCTCGCCAT 2275 Qy 1122 CACCTTCATCTCCTCATCTCCTGCAGCTGCTCGCGTGTGGTTCTGTGTGTG	1242 CGTGCTCAAGTGCGACATCTCGGACCTGCCTGCCTGCTGGGGTACAGCATGCT 1302 GGTGATGGTGACATCTCGGACCTGTCGCTTCTCGCTGGGGCTACAGCATGCT 1302 GCTGATGGTCACGTACTCTGTACGCCTTCAAGACCTGGGGGTGCCCGAGGCTTCAA 1302 GCTGATGGTCACGTTACTCTTGTACGCCTTCAAGACCTTCAA 1362 GGTCATGGTCACGTCACGTTATCCTTCAAGACCTTCAA 1362 CGAGGCCAAGGCCATCACGTTATCCACATGTACACCTGCATTGTTCAGATCTTCAA 1362 CGAGGCCAAGCCCATCACGATTATCACATTGTACACCTTCAATTGTTATTATATATA	1422	Qy 1602 CGTGGTCACCGCCGCCACCATGTCCAACAAGTTCACACAGAAGGCCAACTTCAGGCCCAA 1661 Db 2756 CGTCGTTACGGCGGCCACCATGTCCAACAAGTTCACGAGAAGGGCAACTTCCGGCCCAA 2815 Qy 1662 TGGGGAAGCCAAATCAGAGCTGTGTGAGAACCTGGAGGCCCAGCGCTGGCTACCAACA 1721 Db 2816 CGGAGAGCCAAATCAGAGTCTGCGAAACCTTGAGGCCCCAGCGCTGGCCACAACA 2875 Qy 1722 GACCTACGTCACCTACCCACCACCACCACCACCAGCGCTGGCCCCAACA 2875 Db 2876 GACTTACGTCACCTACCACCACCATCAGCATCTAG 2909	AX548890 AX548890.1 GI:25813754 Home sapiens (human) AX548890 AX54880 AX548890 AX54880 AX5488

ò	1062 GCAGGGCAAACGGTCGGTCAGTGC	GCAGGGCAAACGGTCAGTGCCCCGCGTTTCATCAGCCGGCCTCGCAGCTGGCCAT 1121	
ପ୍ଧ	2216 GCAGGCAAGCGCTCGGTCAGTGC	ĠĊŔĠĠĠĊŔŔĠĊĠĊŢĊĠĠŢĊŔĠŢĠĊĊĊŔĊĠĊŢŢĊŔŢĊŔĠĊĊĊĠĊĊŢĊŔĊŔĠĊŢĠĠĊĊŔŢ 2275	
ò	1122 CACCTTCATCCTCATCTCCTGCA	CACCTTCATCTCCTGCAGCTGCTCGGCATCTGCGTGTGGTTCGTGGTGGACCC 1181	
Q	2276 CACCTTCAGCCTCATCTCGCTGCA	CACCTICAGCCICATCICGCTGCAGCTGCTGGGCATCTGTGTGTGTTTGTGGTGACCC 2335	
&	1182 CTCCCACTCGGTGGTGGACTTCCA	CTCCCACTCGGTGGTGGACTTCCAGGACCAACGGACACTTGACCCCCGCTTTGCCAGGG 1241	
qq	2336 CICCCACTCGGTGGTGGACTTCCA	CTCCCACTCGGTGGACTTCCAGGACCAGCGGACACTCGACCCCCGCTTCGCCAGGGG 2395	
ò	1242 CGTGCTCAAGTGCGACATCTCGGA	CGTGCTCAAGTGCGACATCTCGGACCTGTCGTCATCTGCTGCTGCTGGCTACAGCATGCT 1301	
qa	2396 TGTGCTCAAGTGTGACATCTCGGA	TGTGCTCAAGTGTGACATCTCGGACCTGTCGCTCATCTGCCTGC	
È	1302 GCTGATGGTCACGTGTACTGTGTA	GCTGATGGTCACGTGTACTGTGTACGCCATCAAGACCCGAGGCGTGCCCGAGACCTTCAA 1361	
qq	2456 GCTCATGGTCACGTGCACCGTGTA	GCTCATGGTCACGTGCACCGTGTATGCCATCAAGACACGCGCGCG	
ò	1362 CGAGGCCAAGCCCATCGGCTTCAC	CGAGGCCAAGCCCATCGCTTCACCATGTACACCACCTGCATTGTCTGGCTGG	
qq	2516 TGAGGCCAAGCCCATTGGCTTCAC	TGAGGCCAAGCCCATGGCTTCACCATGTACACCACTTGCATCGTCTGGCTGG	
δ	1422 CCCCATCTTTTTGGCACCTCACA	CCCCATCTTTTTGGCACCTCACAGTCAGCCGACAAGCTGTACATCCAGACAACCACT 1481	
qq	2576 CCCCATCTTTTGGCACCTCGCA	CCCCATCTTTGGCACCTCGCAGTCGGCCGACAAGCTGTACATCCAGACGACGCT 2635	
ò	1482 GACGGTCTCCGTGAGTCTGAGCGC	GACGGTCTCCGTGAGTCTGAGCGCTTCAGTGTCCCTGGGGATGCTCTACATGCCCCAAAGT 1541	
qq	2636 GACGGTCTCGGTGAGTCTGAGCGC	GACGGTCTCGGTGAGTCTGAGCGCCTCGGTGTCTTGGGATGCTCTACATGCCCAAAGT 2695	
ò	1542 CTACATCATCTTTTCACCCGGA	CTACATCATCCTTTCCACCGGAGCAGAACGTGCCCAAGCGCAAGCGCAGTCTCAAAGC 1601	
qa	2696 CTACATCATCCTCTCCACCGGGA	CTACATCATCCTCTTCCACCCGGAGCAGAACGTGCCCCAAGCGCAAGCGCAGCCTCAAAGC 2755	
ò	1602 CGTGGTCACCGCCGCCACCATGTC	CGTGGTCACCGCCGCCACGATGTCCAACAAGTTCACACAGAAGGCAACTTCAGGCCCAA 1661	
οp	2756 CGTCGTTACGGCGGCCACCATGTC	CGTCGTTACGGCGGCCACCATGTCCAACAAGTTCACGCAGAAGGGCAACTTCCGGCCCAA 2815	
ò	1662 TGGGGAAGCCAAATCAGAGCTGTG	TGGGGAAGCCAAATCAGAGCTGTGTGAGAACCTGGAGACCCCAGCGCTGGCTACCAACA 1721	
Ор	2816 CGGAGAGCCAAGTCTGAGCTCTG	CGGAGAGGCCAAGTCTGAGCTCTGCGAGAACCTTGAGGCCCCAGCGCTGGCCACCAAACA 2875	
ò	1722 GACCTACGTCACCTACACCATGCCATCTAG	ATGCCATCTAG 1755	
qq	2876 GACTTACGTCACTTACACCAACCATGCAATCTAG	ATGCAATCTAG 2909	

Search completed: June 21, 2005, 07:10:57 Job time: 7726 secs

Matche 1562; Conservative 0; Mismatches 152; Indels 0; Gaps 0	1816 TGACATGGGCCCACAGAGCTGCCGGCCCATCCCCCATCATCATCATA 1915 1915 1916 1
1062 GCAGGGCAAACGGTCGGTCAGTCCCCGCGTTTCATCAGCCCGGCCTCCACACGTGGCCCACTTCATCAGCCCGCCTCACACGCTGGCCCCCCTCACACGCTGGCCCCCCTCACACGCTGGCCCCTCACACGCTGCCCCCTCACACGCTGCCCCCTCACACGCTGCCCCCTCACACGCTCCCCCCTCCACCGCTCCCCCCTCACCCCCTCCACCGCTCCCCCCTCCACCCCCTCCACCGCTCCCCCCCTCCACCCCCCTCCCCCCCC	DEFINITION Sequence 83 from Patent #003000928. ACCESSION AX658167 AUTHORS Source Homo sapiens (human) ORGANISM Homo sapiens (human) ORGANISM Edwaryota; Primates; Catarrhini; Hominidae; Homo. REFERENCE I Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo. REFERENCE I AUTHORS Petersen, M. M. and Elsner, H. I. TITLE Methods for identification of cancer cell surface molecules and cancer specific promoters, and therapeutic uses thereof JOURNAL Patent: WO 30000928-A 83 03-JAN-2003; Odin Medical A/S (DK) FRATURES I . 3884 Dource J. 2992-B. 200742 AUTHORS Petersen, M. Authors and Elsner, H. I. TITLE Methods for identification of cancer cell surface molecules and cancer specific promoters, and therapeutic uses thereof JOURNAL Patent: WO 30000928-A 83 03-JAN-2003; Odin Medical A/S (DK) FRATURES I . 3884 AMM AND LOYPE-WARD SAPIENS